BIZLI CABLES

www.bizli.com.bd

A Product of

RFL
আর এফ এল

TECHNICAL Catalogue

From the desk of Managing Director

Enhancing Customer Satisfaction

Welcome to RFL group, the most diversified and customer focused company in the country. We are the leading company in PVC and Plastics products in Bangladesh. Our plastics and many other products are now merchandized in many world renowned retail chains over 40 countries. We are trying to spread a solid industrial knowledge of 37 years of our group over many other sectors which have still potential to grow.

RFL Group comes to cable manufacturing in January 2014 in Hobigonj Industrial Park, Hobigonj. Both domestic and Industrial cables are getting manufactured conforming to world class standard by European state-of-the-art technology. We are producing and marketing House wiring cable, PVC/XLPE LT Cable, Communication / Instrumenttation cable, Aluminium Over head Conductor, 8 mm copper rod, super enamel wire and some ranges in HT category in the market under the brand name **Bizli** (a Bengali name synonymous to thunder bolt). Other cables like Fiber optics, Bus-Bar and some special purpose cables are in the pipeline.

The plant is fully integrated with 100% Cathode base furnace for 99.99% conductivity primary wire, drawing machine and uPVC extrusion. We are stringently conforming to the quality and standard of cables in terms of thickness, copper & aluminum conductivity and insulation Jacket used.

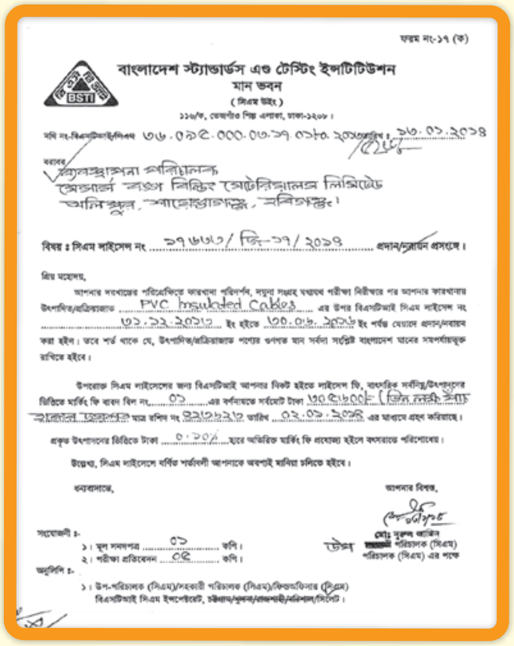
We claim ourselves unique in the country for sales, distribution and marketing. 500 plus educated trained sales people are ready to serve by delivering readymade or customized products supported by 200 vehicles from 110 outlets all over the country.

Our trained qualified engineers are conducting training programs for the local electricians on cable selection, handling, joint and safety issues. Because we are committed to providing you a cable that ensures safe connectivity and prompt conductivity.

Thank you for your continuous patronage for RFL products.

R. N. Paul
MD, RFL Group

Certificate & Credential



ফরম নং-১৭ (ক)

বাংলাদেশ স্ট্যান্ডার্ডস এণ্ড টেস্টিং ইনস্টিটিউশন
মান ভবন
(সিএম উইং)
১১৬/ক, তেজগাঁও শিল্প এলাকা, ঢাকা-১২০৮।

বিষয় : সিএম লাইসেন্স নং ১৭৬৬৩/ জি-১৭/ ২০১৪ প্রদান/নবায়ন প্রসঙ্গে।

প্রিয় মহোদয়,

আপনার দরখাস্তের পরিপ্রেক্ষিতে কারখানা পরিদর্শন, নমুনা সংগ্রহ যথাযথ পরীক্ষা নিরীক্ষার পর আপনার কারখানায় উৎপাদিত/প্রক্রিয়াজাত PVC Insulated Cables এর উপর বিএসটিআই সিএম লাইসেন্স নং ৩১.১২.২০১৩ ইং হইতে ৩০.০৬.২০১৬ ইং পর্যন্ত মেয়াদে প্রদান/নবায়ন করা হইল। তবে শর্ত থাকে যে, উৎপাদিত/প্রক্রিয়াজাত পণ্যের গুণগত মান সর্বদা সংশ্লিষ্ট বাংলাদেশ মানের সমপর্যায়ভুক্ত রাখিতে হইবে।

উপরোক্ত সিএম লাইসেন্সের জন্য বিএসটিআই আপনার নিকট হইতে লাইসেন্স ফি, বাৎসরিক সর্বনিম্ন/উৎপাদনের ভিত্তিতে মার্কিং ফি বাবদ বিল নং ০১ এর বর্ণনামতে সর্বমোট টাকা ৩০৫৮০০/- এর মাধ্যমে গ্রহণ করিয়াছে।

প্রকৃত উৎপাদনের ভিত্তিতে টাকা ০.১০% হারে অতিরিক্ত মার্কিং ফি প্রযোজ্য হইলে কমসময়ে পরিশোধের।

উল্লেখ্য, সিএম লাইসেন্সে বর্ণিত শর্তাবলী আপনাকে অবশ্যই মানিয়া চলিতে হইবে।

ধন্যবাদান্তে,

আপনার বিশ্বস্ত,

পরিচালক (সিএম)
পরিচালক (সিএম) এর পক্ষে

সংযোজনী :-
১। মূল সনদপত্র ০১ কপি।
২। পরীক্ষা প্রতিবেদন ০৫ কপি।

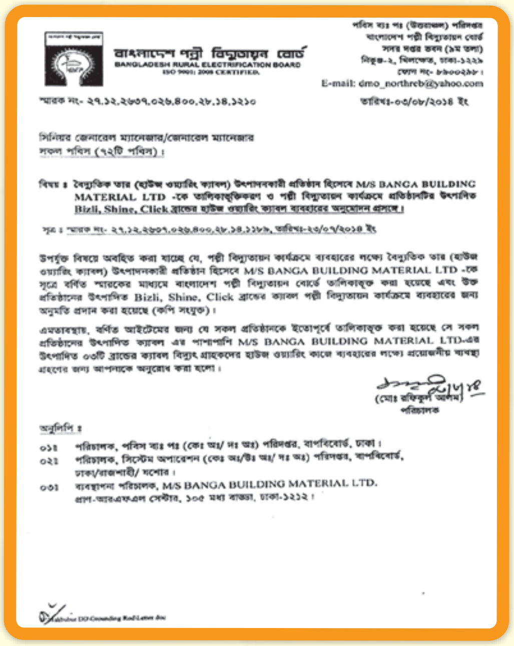
অনুলিপি :-
১। উপ-পরিচালক (সিএম)/সহকারী পরিচালক (সিএম)/ফিল্ড অফিসার (সিএম)

Certificate of Registration

Banga Building Materials Limited

ISO 9001:2008

Manufacture and Sale of Electrical Cable and Melamine Products



বাংলাদেশ পল্লী বিদ্যুতায়ন বোর্ড
BANGLADESH RURAL ELECTRIFICATION BOARD
ISO 9001: 2008 CERTIFIED.

E-mail: dmo_northreb@yahoo.com

স্মারক নং- ২৭.১২.২৬৩৭.০২৬.৪০০.২৮.১৪.১২১০

তারিখঃ-০৩/০৮/২০১৪ ইং

সিনিয়র জেনারেল ম্যানেজার/জেনারেল ম্যানেজার
সকল পবিস (৭২টি পবিস)।

বিষয় : বৈদ্যুতিক তার (হাউজ ওয়্যারিং ক্যাবল) উৎপাদনকারী প্রতিষ্ঠান হিসেবে M/S BANGA BUILDING MATERIAL LTD -কে তালিকাভুক্তিকরণ ও পল্লী বিদ্যুতায়ন কার্যক্রমে প্রতিষ্ঠানটির উৎপাদিত Bizli, Shine, Click ব্র্যান্ডের হাউজ ওয়্যারিং ক্যাবল ব্যবহারের অনুমোদন প্রসঙ্গে।

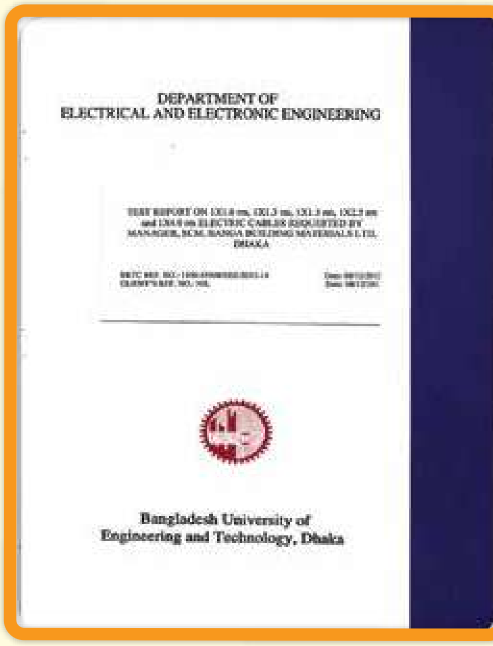
উপর্যুক্ত বিষয়ে অবহিত করা যাচ্ছে যে, পল্লী বিদ্যুতায়ন কার্যক্রমে ব্যবহারের লক্ষ্যে বৈদ্যুতিক তার (হাউজ ওয়্যারিং ক্যাবল) উৎপাদনকারী প্রতিষ্ঠান হিসেবে M/S BANGA BUILDING MATERIAL LTD -কে সূত্রে বর্ণিত স্মারকের মাধ্যমে বাংলাদেশ পল্লী বিদ্যুতায়ন বোর্ডে তালিকাভুক্ত করা হয়েছে এবং উক্ত প্রতিষ্ঠানের উৎপাদিত Bizli, Shine, Click ব্র্যান্ডের ক্যাবল পল্লী বিদ্যুতায়ন কার্যক্রমে ব্যবহারের জন্য অনুমতি প্রদান করা হয়েছে (কপি সংযুক্ত)।

এমতাবস্থায়, বর্ণিত আইটেমের জন্য যে সকল প্রতিষ্ঠানকে ইতোপূর্বে তালিকাভুক্ত করা হয়েছে সে সকল প্রতিষ্ঠানের উৎপাদিত ক্যাবল এর পাশাপাশি M/S BANGA BUILDING MATERIAL LTD-এর উৎপাদিত ০৩টি ব্র্যান্ডের ক্যাবল বিদ্যুৎ গ্রাহকদের হাউজ ওয়্যারিং কাজে ব্যবহারের লক্ষ্যে প্রয়োজনীয় ব্যবস্থা গ্রহণের জন্য আপনাকে অনুরোধ করা হলো।

(মোঃ রফিকুল আলম)
পরিচালক

অনুলিপি :

০১। পরিচালক, পবিস ব্যঃ পঃ (কেঃ অঃ/ দঃ অঃ) পরিদপ্তর, বাপবিবোর্ড, ঢাকা।
০২। পরিচালক, সিস্টেম অপারেশন (কেঃ অঃ/উঃ অঃ/ দঃ অঃ) পরিদপ্তর, বাপবিবোর্ড, ঢাকা/রাজশাহী/ যশোর।
০৩। ব্যবস্থাপনা পরিচালক, M/S BANGA BUILDING MATERIAL LTD.



DEPARTMENT OF
ELECTRICAL AND ELECTRONIC ENGINEERING

Bangladesh University of
Engineering and Technology, Dhaka

Certificate & Credential

केन्द्रीय विद्युत अनुसंधान संस्थान

CENTRAL POWER RESEARCH INSTITUTE

BY SPEED POST

DIAGNOSTIC, CABLES & CAPACITORS DIVISION
CABLES LAB

2/1/DCCD/CAB/2015-16

Date: 23.03.2016

M/s. Banga Building Materials Ltd.,
GA-105, Progoti Swaroni, Middle Badda,
Dhaka – 1212, Bangladesh

Kind Attn: Mr. Md. Aktaruzzaman

Ref: Your Request letter dated 22.12.2015
Sub: Type Test on 1C x 300 sq.mm 600 / 1000 V PVC Cable

With reference to the above, type test on 1C x 300 sq.mm 600 / 1000 V PVC Cable as per IEC 60502 - 1 – 2009 has been completed and our Test report No. DCCD-15114 dated 23.03.2016 is enclosed.

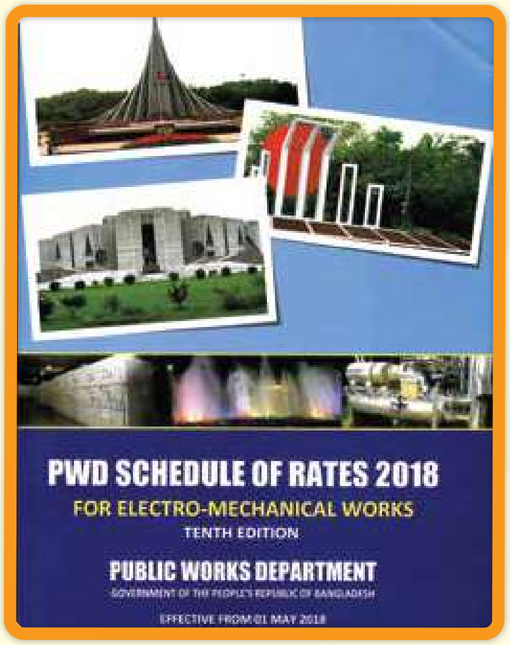
In order to prevent tampering of test report, CPRI has introduced hologram on the first page of the test report with effect from 01.10.2007

Any discrepancy in these test reports may be brought to notice within forty five days from the date of issue of test reports. Please acknowledge the receipt of the test report.

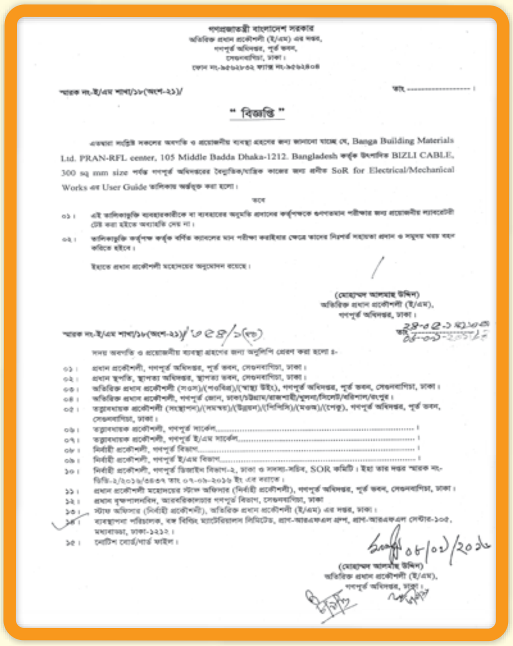
Thanking you

Yours faithfully

(R.Mallikarjunappa)
Joint Director



PWD SCHEDULE OF RATES 2018
FOR ELECTRO-MECHANICAL WORKS
TENTH EDITION
PUBLIC WORKS DEPARTMENT
GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
EFFECTIVE FROM 01 MAY 2018



COMMON FEATURES OF BIZLI CABLES

Energy Efficient Cables

BIZLI Cables provide highest level of electrical conductivity at in the world at 101% copper conductivity, exceeding the parameter indicated by the International Annealed copper standards (IACS). This ensures minimum loss throughout the length of the cable which translated to saving of 2-3% in the electricity bill. It also provides additional protection against voltage fluctuations.

Low Voltage Drop

Drop in voltage from point of supply to the end receiving point is called voltage drop. High Voltage drop across conductor is undesirable as it reduces the supplied energy. Bizli cables have adequate conductor diameter to ensure low voltage drop and higher efficiency while using electrical equipment.

Short-Circuit Protection

Fire caused due to short-circuit is the most common electrical mishap. Short-circuit can be caused by a host of reasons such as faulty wiring, broken insulation due to inferior quality of insulation, circuit-overload, and defective plugs, switches, cords, receptacles, etc. Bizli cable ensure superior insulation and conductor characteristics to prevent short-circuit due to wiring.

Higher Di-Electric Strength

Di-electric strength represents the magnitude of voltage endured by a test-piece of wire when a specified voltage is passed through it for a specified duration of time. Higher di-electric strength means better electrical characteristics. Bizli has an in-house PVC compound manufacturing unit where PVC is blended to offer high di-electric strength to prevent electric breakdown in PVC

Higher Convection of Heat

Convection is the flow of heat from hot cool region. Lubricants like wax are required to prevent PVC-melt from sticking to hot extruder surface, which ensures a good heat transfer within the melt. Higher convective heat dissipation capability of compound enables Bizli cables to carry more current in overload conditions.

Water Proof and UV resistant

In many building, construction concrete may itself not be water-tight. Contact with water caused deterioration of the cable's electrical and mechanical properties. Exposure to cable polymer to UV radiation induces chemical processes that cause-polymer damage like chalking, loss of impact or tensile strength and a host of other chemical changes. All this can greatly reduce the service life of the cable and expose people to electrical shocks.

Bizli has developed a high-quality thermoplastic insulation compound made of single carbon-bond polymer chain This makes Bizli cables impermeable to water, ultra violet (UV) radiation and chemicals, thereby significantly enhancing the life and safety of Bizli cable.

FEATURES OF BIZLI FR & FRLS CABLE

FR (Flame Retardant)

Application: Used for wiring of electrical control panels, industrial sheds, buildings etc. The multi strand flexible conductors make it ideal of concealed wiring.

Features: Each wire is manufactured using 99.99% pure, electrolytic grade, bright annealed bare copper with more than 100% conductivity for conductor.

Highest purity and conductivity of copper ensures greater Saving of electrical energy and helps to reduce electrical energy and helps to reduce electricity bills. The conductor is made of multiple strands of finely drawn copper wires thereby offering greater flexibility which makes these wires ideal for conduit wiring.

The wires are insulated with FR (Flame Retardant) PVC compound, specially formulated and manufactured in-house. This PVC compound has FR properties of high oxygen and temperature index. These properties help in restricting the spread of fire. even at very high temperatures. This special compound also offers high insulations resistance and dielectric. Insulation is applied over the conductor by the process of dual extrusion using state of the art extrusion lines. The outer skin determines the colour identification while the inner layer is pure insulation which provides extra protection. All wires are subjected to high voltage spark testing to make sure that there are no weak spots in the insulation.

FR cable gives extra protection against electrical shocks, short circuits and fires.

Properties: Critical oxygen index minimum 29%
Temperature index minimum 250° C

FRLS (Flame Retardant low Smoke)

Application: These cables are ideal for wiring of electrical control panels, industrial sheds, buildings etc. Where increased fire safety is desired. During a fire these cables not only emit less smoke but also retard the spread of fire enabling those trapped inside buildings/ shade to escape safely.

Features: During fire, ordinary PVC insulated wires give out thick black smoke. This impairs visibility and hampers rescue operations. FRLS cables, on the contrary, not only emit very little smoke, but also retards the spread of fire. It is thus ideal for concealed and conduit wiring in multistoried high rise buildings Such as hotels, banks, hospitals, factories, commercial and residential complexes, etc. where the density of people is high. These wires go through rigorous tests to ensure the highest standards of quality.

Properties: Critical Oxygen index minimum 29%
Temperature index minimum 250°C
Maximum smoke density 60%

Product Range

- PVC Insulated/Skin Coated Copper/Aluminium House Wiring/Domestic Cables
- PVC/XLPE Insulated, PVC Sheathed Power and Control Cables with or without Armour
- XLPE Insulated, PVC Sheathed Power Cables up to 17.5 kV voltage
- Various Types of FR, FRLS, LSHF Cables
- Various Types of PE insulated Telecommunication Cables, Co-axial Cables, Drop Wires
- Copper Wire Braided, AI-Mylar Tape Shielded, Pair Shielded and Overall Shielded Cables
- Pre-Assembled Insulated Aluminium Cables with ACSR messenger wire
- Bare Aluminium & Copper Conductors and Wires with or without Annealing
- Insulated or Bare Aluminium Stranded Conductors (AAC)
- Aluminium Conductor Steel Re-Inforced (ACSR)
- All Aluminium Alloy Conductors (AAAC)
- Customized Cables, Wires, and Conductors as per Customers' Requirement

Product Design

Our expert team is able to design and customize cables to suit specific customers' requirement. To ensure the quality of our cables, our qualified engineers use the latest technology and equipments to test and monitor the entire production process. In today's market no product can expect sell effectively, if it is not rooted in sound engineering design. Bizli CABLES are designed and manufactured with the latest national and international standards.

Product Test

Using the latest technology and equipment Bizli Cables Ltd. carries out a full range of Routine and Type Tests as per BS, IEC, VDE and other National and International Standards. In the manufacturing process we maintain stringent quality assurance procedures to give long term reliability and peace of mind.

Health, Safety & Environment

To maintain health and safety standards, regular training is provided to all of our employees that covers special hazards, how to protect oneself, causes of accidents at work, preventing slips and falls and how to use tools and machine safely. Bizli Cables Ltd. uses only tried and tested materials and follow the processes in full compliance with all relevant National and International Standards to protect and preserve the environment.

Factors to be Considered in Cables Selection Process

Installation: The area of installation whether indoor, outdoor, underground, or aerial is critical in the choice of cable because the exposures to various elements may affect the performance and safety of cable. This is where the characteristics of insulation play an important part.

Voltage Rating: Determine the size of the conductor and the thickness and type of insulation.

Conductor Size: The current load, kVA load and kilowatt load are governed by voltage drop besides the heating and power factors. These must be known before determining the conductor size.

Ampacity Limitation: The maximum current a cable can safely carry without exceeding the capacity of the insulation or jacketed material.

External Condition: The presence of other sources of heat located in the installation, such as pipes, corrosive agents, structural materials and other cables can cause increase in the temperature of cables.

Optimum cable performance can be obtained from a cable such as Bizli CABLES, with access to the latest developments in conductor, insulation, and protective materials technology. Our experienced Technical staff can provide guidance on cable selection and installation and can ensure that you get the right cables for your job.

Basic Cable Laying Instructions

Power Cables up to nominal voltage of 30 kV are suitable for indoors, outdoors, direct burial in earth as well as in water or in concrete. The installation must be carried out carefully, avoiding any impact on the properties of the cable & followings have to be considered,

- Protection against direct sun irradiation
- Laying on solid, smooth and free of stones ground or bedding in sand or stone free soil
- Protection against mechanical damage
- Protection against chemical and thermos influence

The maximum permitted pulling force during installation is P = S X A
Where, S = 50 N/m^2 and A = Sum of the cross section of all copper conductors. All turns of the installation line shall be well shaped and equipped with rolls.

The bending radius of single core cables shall not be smaller than 15 X DA, for multi-core cables 12 X DA.

The minimum installation temperature for the cables is -5°C for cables with PVC Sheath and -20°C for cables with PE Sheath. This value refers to the cable temperature, not the environmental temperature.

The inner diameter of ducts and tubes should be not less than 1.5 X DA, if more than one cable per tube is installed, they should not tight each other.

Underground cables should be buried at least 60 cm under the surface, the depth of cables under roadways not less than 80 cm.

Fixing of Cables

If cables are installed horizontally on walls, ceiling or trays by clamps, the distance between fixings 20 X DA, but not more than 80 cm. For vertical installation the distance may be increased, but not more than 150 cm. Compression of the cable must be strictly avoided. Single-core cables must be fixed with non-magnetic clamps only.

Meter Marking

According to the standard cables with diameter > 10 mm must carry a meter mark. The marks may have a tolerance of 1%, but they are not calibrated. Incomplete or missing marks (on short distances) may not be claimed. For defining the delivery length only calibrated measuring equipment has to be used.

CABLE STRUCTURE

Low voltage cables are manufactured with PVC, PE and XLPE insulation for various applications within voltage range from 300V to 1000V category.

APPLICATIONS

Extensively used for power distribution, control, instrumentation, communication, signaling and data transmission applications.

PVC, as insulation and sheath compounds, has the following superior features

- Strong and made for easy processing
- Resistant to water, moisture, oils and chemicals
- PVC black compound can resist ultraviolet degradation
- Specially formulated PVC is flame retardant and reduces emission of halogens and smoke

PE,as insulation, has the following superior features

- Good for low distortion and high speed data transmission
- Used for precision audio, pulse or R.F. signal transmission
- Good for all modem electronic equipments where high speed data processing is required
- Low capacitance, with high speed signal processing in computer. Telephone etc.

XLPE, as insulation has the following superior features

- Low dielectric loss
- Higher temperature rating and higher emergency overload, rating.
- High continuous current rating
- Superior short circuit rating
- Much better insulation resistance
- Higher resistance to moisture
- Resistant to chemicals and corrosive gases
- Exhibits better properties, such as resistance to vibration, impact, ageing and hot deformation
- termination and jointing methods are easy, as compared to other cables

1.0 CONDUCTORS

A conductor is the metallic part of cable that is carrying the electric current, Stranding makes cable flexible and easy to handle while shaping makes them compact. Under strict supervision, stranding and compacting is carried out by skilled operators to bring out a smooth surface so as to ensure minimum stress development on the surface of the conductor.

Conductor materials are

- Plain annealed copper conductor (to ASTM B3, ASTM B49)
- Aluminum (to ASTM B233)

The conductor structure is complying to the requirements of IEC 60228 (BS EN 60228) Class 1 Solid, class 2 stranded, non Compacted, compacted or compacted sector shaped conductors, and class 5 Flexible conductors.

The shape codes are

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

2.0 INSULATION

- Bizli cables are designed and manufactured with polymer dielectrics to bear thermal and thermo mechanical stresses safely at continuous normal and short circuit temperature conditions, the insulation thickness is selected based on the designated voltage rate complying with standards.

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

  Insulation material is selected to match the desired customer require ments and customer specification. Standard polyvinyl chloride type (PVC/A 70°C) complying with IEC 60502-1 requirements or Types (TI-1 70°C) & heat resistant PVC type (TI-3 90°C) complying with BS 6004.

  Cross liked polyethylene XLPE complying with IEC 60502.

  The XLPE is selected to comply with the requirements of GP8 evaluation as specified in BS 7655-1.3

  Bizli Cables standard insulation color codes are described in Table-1 (i.e. used in the products of this catalogue), meanwhile other color code is offered to our customers upon their request.

Table 1 : Insulated Core Color Codes

Number of Cores	Colors to IEC	Colors to BS
1	Red/Black/Yellow/Blue/Green/ or Yellow-Green	Red/Black/Yellow/Blue/Green/ or Yellow-Green
2	Red & Black	Brown & Blue
3	Red, Yellow and Blue	Brown, Black and Grey
4	Red, Yellow, Blue and Black	Blue, Brown, Black and Grey
5	Red, Yellow, Blue, Black and Green/yellow	Green/Yellow, Blue, Brown, Black and Grey

The insulation is covered by Ultra-violet (UV) resistant Master batch. This protects the insulation from deterioration when exposed to continuous sun light.

3.0 CABLE ASSEMBLY

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

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

4.0 BEDDING

It could be also called inner sheathe or inner jacket, which serves as a bedding under cable armouring to protect the laid up cores and as a separation sheath.

5.0 ARMOURING

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

- One layer of Galvanized Round Steel Wire is applied helically over the bedding.
- Galvanized Flat Steel wire fallowed by galvanized steel tape is applied helically over the bedding
- Aluminum wire armouring for a single Core Cable acts as non magnetic armour

6.0 OUTER SHEATH (OUTER JACKET)

- It is the outer protection part of the cable against the surrounding environment.
- Several materials can be used as oversheath based on the intended application.
- General purpose PVC Type ST2 compound as specified in IEC 60502-1, or its equivalent PVC Type 9 to BS 7655-4.2.

High density polyethylene HDPE compound fulfill and exceed the requirements of type ST7 IEC 60502-1 for cables that require to be abrasion resistant, protected against water ingress and strong Environmentel Stress Crack Resistant.

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

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

All cables produced at Bizli cables Company with PVC FR/FRLS jackets are complying with the flame retardant test to IEC 60332-1. Whenever a requirement for more severs tests as IEC 60332-3 is needed, a jacketing compound with Oxygen index value more than 29% will be used.

TESTING AND QUALITY ASSURANCE

The various tests carried on Low Voltage cables are classified in three different groups.

ROUTINE TESTS

The following tests constitute Routine Tests which are carried out on each and every length of cable as per relevant specification.

Conductor Resistance Test

High voltage Test

TYPE TESTS

These are carried out on samples taken from each production lot as per relevant specification. They are carried out to prove conformity as regards the general qualities and design to the particular type of cables.

ACCEPTANCE TESTS

These tests are carried out as per relevant specification in the presence of the concerned Inspecting Authority for Testing Approval and Release of material for inspection.

Cables Code Designation

abbreviation	Interpretation
N	According to VDE Standard
B	According to British Standard
Y	Insulation or Sheath of Thermoplastic based on PVC
A	Aluminium
NA	Cable With Aluminium Conductor
A	Insulated Single Core Cable
M	Sheathed Cable
MH	Medium Hand-held Equipment Cable
I	International Colour Code
F	Flat Cable
E	Earth Continuity Conductor
F	Galvanized Steel Flat Wire armouring
C	Concentric Conductor of Copper
R	Galvanized Steel Round Wire armouring
GB	Helical Galvanized Steel Tape
I	According To BS-2004 (Imperial System)
re	Conductor of Single Solid wire having Circular Cross-section
rm	Conductor of Multiple Stranded wires having Circular Cross-section
Sm	Conductor of Multiple Stranded wires having Sector Shaped Crosse-section
rmc	Compacted Circular Stranded Conductor
se	Sector Shaped Solid
2X	Cross-Iinked Polyethylene Insulation (XLPE)
S	Shield of Copper
SE	For Multi core Cables With Individual Screens
Ra	Round Aluminium wire armoured
H	Non-metallic Semi-Conducting Screen over Conductor & over Insulation
2	Polyethylene (PE) Insulation
-J	with green-yellow earth wire
-O	without green-yellow earth wire
-JZ	core numbering with one core green-yellow
-OZ	core numbering without one core green-yellow

ABBREVIATION

Abbreviation	Interpretation
BDS	Bangladesh Standard
IEC	International Electrotechnical Commission
VDE	Union of German Electrical Engineer
BS	British Standard
ASTM	American Society for Testing and Material
ICEA	Insulated Cable Engineers Associana
NEMA	National Electric Manufacturers Association
JIS	Japanese Industrial Standard
SNI	Standards National Indonesia
DIN	Deutsche Industrial Norms
ANSI	American National Standard Institution (USA)
AS	Australian Standard (Australia)
BSI	British Standard Institution (Great Britain)
BV	Bureau Veritas (France)
CATV	Community Antenna Television (International)
CEBEC	Committee Electrotecnique Beige (Belgium)
CEE	International Commission on Rules for the Approval of Electrical Equipment
CEI	Commission Electrotechnique International
CENELEC	Committee European de Normalization Electrotechnique
CSA	Canadian Standard Association (Canada)
DEMKO	Denmarks Electric Material Kontrol
DKE	Deutsches Electrotechnique Kommission in DIN & VDE (Germany)
EN	European Standards (Germany)
HN	Harmonisation des Normes (france)
IEE	Institute of Electrical Engineers (Great Britain)
IEEE	Institute of Electrical & Electronics Engineers (Great Britain)
ISO	International Organization for Standardization
MIL	Military Specification (USA)
NEC	National Electrical Code (USA)
NF	Normes Francaises (France)
NFC	Normes Francaises Class C (France)
SAE	Society of Automotive Engineers
SEK	Svenska Elektriska Kommission (Sweden)
SEV	Switzerlands Electrotechnical Verein (Switzerland)
UL	Underwriters Laboratories (USA)
UNI	Unificazione National Italiana (Italy)
VDEW	Verband Deutscher Elecktrotechniker W (Germany)

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As Per IEC 60502-2 (3.6 KV to 30 KV)

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HOUSE WIRING CABLE

BYA/ BAYA

PVC (Skin Coated) Insulated, Non-sheathed Single Core Cable

RATED VOLTAGE
U◦/U: 450/750V

APPLICATION

For Indoor fixed installations in dry locations in switchboards and distributors. Also suitable for field protected installation in and appliance up to 1000V a.c or up to 750V to earth d.c.

REFERENCE STANDARD

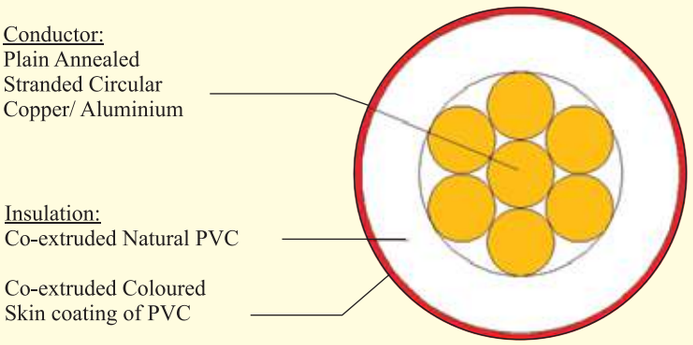
BS 6004, BDS 900, IEC 60227-3, IEC 60332, IEC 61034

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Skin Coating Insulation
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: PVC (Skin Coated), TI1 temperature rating 70ºC as per BS 7655

FR & FRLS insulation available on request.

COLOR

Insulation: Red, Yellow, Blue, Black, Green, Yellow/Green.

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
			lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x0.5 re	1/0.8	0.6	1.9	2.3	10	-	36	-	8	-	11	-
1x0.75 re	1/0.98	0.6	2.1	2.5	13	-	24.5	-	10	-	13	-
1x1.0 re	1/1.13	0.7	2.5	3.0	16	-	18.1	-	13	-	16	-
1x1.0 rm	3/0.65	0.7	2.5	3.0	17	-	18.1	-	13	-	16	-
1x1.3 rm	3/0.74	0.7	2.6	3.2	20	12	14.03	22.95	15	10	19	12
1x1.5 re	1/1.38	0.7	2.6	3.2	22	12	12.1	18.1	16	11	20	13
1x1.5 rm	3/0.80	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x1.5 rm	7/0.52	0.7	2.7	3.3	23	13	12.1	18.1	16	11	20	13
1x2.0 rm	3/0.91	0.8	3.1	3.8	30	17	9.11	15.18	20	13	25	15
1x2.5 re	1/1.78	0.8	3.2	3.9	32	17	7.41	12.1	22	15	28	18
1x2.5 rm	7/0.67	0.8	3.3	4.0	33	19	7.41	12.1	22	15	28	18
1x3.0 rm	7/0.74	0.8	3.5	4.3	40	21	5.99	9.84	26	17	31	20
1x4.0 rm	7/0.85	0.8	3.8	4.6	51	26	4.61	7.41	30	20	37	24
1x4.5 rm	7/0.91	0.8	3.9	4.7	56	28	3.89	6.51	32	21	39	25
1x6.0 rm	7/1.04	0.8	4.3	5.2	71	34	3.08	4.61	38	25	47	31
1x7.0 rm	7/1.12	1.0	4.5	5.8	85	42	2.61	4.29	42	27	51	33
1x9.5 rm	7/1.32	1.0	5.4	6.5	113	52	1.86	3.09	50	32	61	39
1x10 rm	7/1.35	1.0	5.6	6.7	117	54	1.83	3.08	52	34	63	41
1x14.5rm	7/1.63	1.0	6.2	7.5	164	72	1.23	2.03	65	40	79	50
1x16 rm	7/1.70	1.0	6.4	7.8	179	77	1.15	1.91	70	45	85	55
1x16 rm	19/1.04	1.0	6.5	8.0	181	79	1.15	1.91	70	45	85	55

BYA/ BAYA

PVC Insulated, Non-sheathed Single Core Cable

RATED VOLTAGE
U◦/U: 450/750V

APPLICATION

For Indoor fixed installations in dry locations in switchboards and distributors. Also suitable for field protected installation in and appliance up to 1000V a.c or up to 750V to earth d.c.

FEATURES

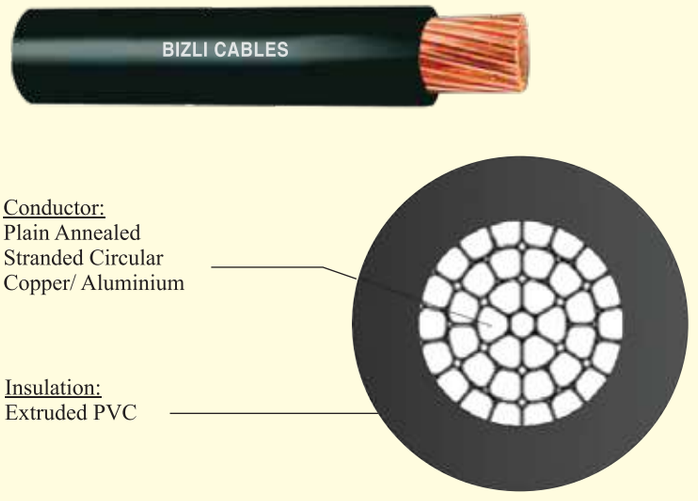
Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-3, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed stranded/ compacted circular Copper/ Aluminum, Class-2 as per IEC 60228



Insulation: Polyvinyl Chloride (PVC) , TI1 temperature rating 70ºC as per BS 7655

FR & FRLS insulation available on request.

COLOR

Insulation: Red, Yellow, Blue, Black, Green, Yellow/Green.

Cont :

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
			lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x25 rm	7/2.14	1.2	8.1	9.7	276	114	0.727	1.2	91	60	110	72
1x25 rm	19/1.3	1.2	8.2	9.9	278	116	0.727	1.2	91	60	110	72
1x35 rm	min.6	1.2	9.0	10.9	373	152	0.524	0.868	112	73	136	88
1x50 rm	min.6	1.4	10.8	12.8	532	216	0.387	0.641	136	88	164	107
1x70 rm	min.12	1.4	12.1	14.6	732	285	0.268	0.443	173	112	207	137
1 x95 rm	min.15	1.6	14.1	17.1	985	382	0.193	0.32	216	140	253	165
1x120 rm	min. 18/15	1.6	15.6	18.8	1227	470	0.153	0.253	244	158	291	188
1x150 rm	min. 18/15	1.8	17.3	20.9	1535	572	0.124	0.206	-	-	333	217
1x185 rm	min. 30	2.0	19.3	23.3	1891	705	0.0991	0.164	-	-	381	248
1x240 rm	min. 34/30	2.2	22.0	26.6	2458	910	0.0754	0.125	-	-	452	295
1x300 rm	min. 34/30	2.4	24.5	29.6	3055	1125	0.0601	0.10	-	-	526	342
1x400 rm	min. 53	2.8	27.5	33.2	4078	1505	0.047	0.0778	-	-	639	416
1x500 rm	min. 53	2.8	30.5	36.9	5048	1865	0.0366	0.0605	-	-	752	489
1x630 rm	min. 53	2.8	34.0	41.1	6363	2310	0.0283	0.0469	-	-	855	556

BYA Flexible (BYAF)

PVC Insulated, Non-sheathed Single Core Flexible Cable

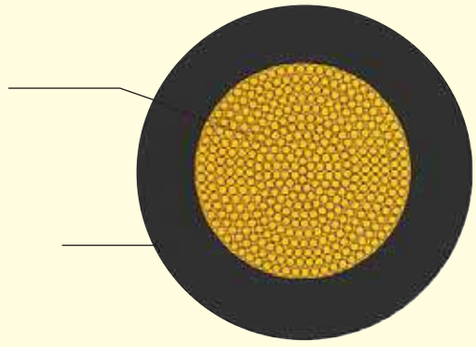
RATED VOLTAGE
U◦/U: 450/750V

APPLICATION

Used for inner wiring of equipment, distributor and switchboards and also suitable for fixed protected installation in or on light fittings for voltage up to 1000V a.c or up to 750V to earth d.c.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-3, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) TI1 temperature rating 70ºC as per BS 7655

FR & FRLS insulation available on request.

COLOR

Insulation: Red, Yellow, Blue, Black, Green, Yellow/Green.

PHYSICAL DATA						ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Overall diameter		Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
			lower limit	upper limit			in conduit	in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps	amps
1 x 1.5 rm	30/0.25	0.7	2.8	3.4	24	13.30	18	22
1 x 2.5 rm	50/0.25	0.8	3.4	4.1	34	7.98	24	30
1 x 4.0 rm	56/0.30	0.8	3.9	4.8	52	4.95	32	39
1 x 6.0 rm	84/0.30	0.8	4.4	5.3	72	3.30	41	50
1 x 10 rm	80/0.40	1.0	5.7	6.8	118	1.91	57	67
1 x 16 rm	126/0.40	1.0	6.7	8.1	180	1.21	75	90
1 x 25 rm	196/0.40	1.2	8.4	10.2	278	0.780	96	105
1 x 35 rm	276/0.40	1.2	9.7	11.7	376	0.554	119	140
1 x 50 rm	396/0.40	1.4	11.5	13.9	536	0.386	142	170
1 x 70 rm	360/0.50	1.4	13.2	16.0	735	0.272	182	215
1 x 95 rm	475/0.50	1.6	15.1	18.2	992	0.206	222	260
1 x 120 rm	608/0.50	1.6	16.7	20.2	1233	0.161	255	302
1 x 150 rm	756/0.50	1.8	18.6	22.5	1540	0.129	298	355
1 x 185 rm	925/0.50	2.0	20.6	24.9	1900	0.106	339	408
1 x 240 rm	1221/0.50	2.2	23.5	28.4	2482	0.0801	401	476

BYM/ BAYM

PVC Insulated, PVC Sheathed Single Core Cable

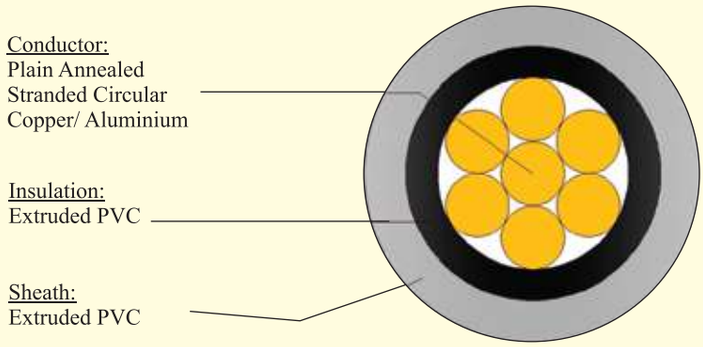
RATED VOLTAGE
U_o/U: 300/500V

APPLICATION

For fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-4, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded/ compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Black

Sheath: Grey

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
				lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x1.0 re	1/1.13	0.6	0.8	3.8	4.5	25	-	18.1	-	13	-	16	-
1x1.0 rm	3/0.65	0.6	0.8	3.8	4.5	26	-	18.1	-	13	-	16	-
1x1.3 rm	3/0.74	0.7	0.8	4.2	4.9	34	26	14.03	22.95	15	10	19	12
1x1.5 re	1/1.38	0.7	0.8	4.2	4.9	33	26	12.1	18.1	16	11	20	14
1x1.5 rm	3/0.80	0.7	0.8	4.2	4.9	33	27	12.1	18.1	16	11	20	14
1x1.5 rm	7/0.52	0.7	0.8	4.2	4.9	33	27	12.1	18.1	16	11	20	14
1x2.0 rm	3/0.91	0.7	0.8	4.6	5.4	44	32	9.11	15.18	20	12	25	15
1x2.5 re	1/1.78	0.8	0.8	4.8	5.8	45	36	7.41	12.1	22	15	28	19
1x2.5 rm	7/0.67	0.8	0.8	4.8	5.8	46	37	7.41	12.1	22	15	28	19
1x3.0 rm	7/0.74	0.8	0.8	5.1	6.1	60	41	5.99	9.34	26	17	31	20
1x4.0 rm	7/0.85	0.8	0.9	5.4	6.8	73	48	4.61	7.41	30	21	37	25
1x4.5 rm	7/0.91	0.8	0.9	5.6	7.0	81	52	3.89	6.51	32	22	39	26
1x6.0 rm	7/1.04	0.8	0.9	6.0	7.4	96	59	3.08	4.61	38	26	47	32
1x7.0 rm	7/1.12	0.8	0.9	6.5	7.8	107	64	2.61	4.29	42	27	51	33
1x9.5 rm	7/1.32	1.0	0.9	7.0	8.7	145	82	1.86	3.09	50	32	61	40
1x10 rm	7/1.35	1.0	0.9	7.2	8.8	147	84	1.83	3.08	52	36	63	43
1x14.5 rm	7/1.63	1.0	1.0	8.0	10.0	206	113	1.23	2.03	65	40	79	50
1x16 rm	7/1.70	1.0	1.0	8.40	10.5	218	117	1.15	1.91	70	46	85	55
1x25 rm	7/2.14	1.2	1.1	10.0	12.5	328	169	0.727	1.2	91	59	110	72
1x35 rm	19/1.53	1.2	1.1	11.0	13.5	432	211	0.524	0.868	112	73	136	88

BYM/ BAYM

PVC Insulated, PVC Sheathed Two Core Cable

RATED VOLTAGE
U_o/U: 300/500V

APPLICATION

For fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

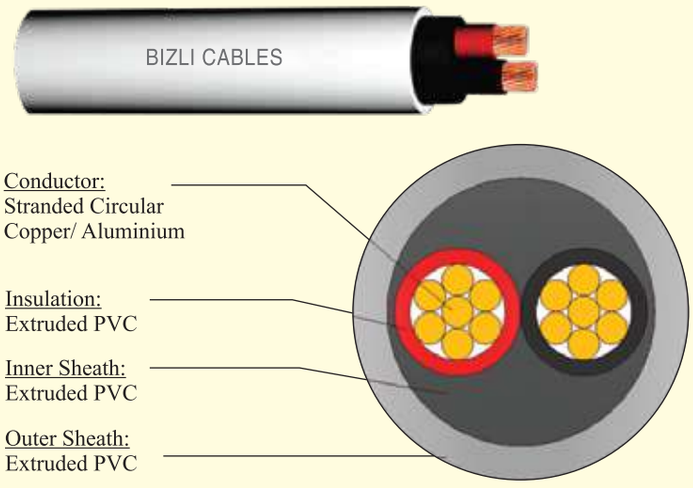
REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-4, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded/ compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655



Inner Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red &Black

Sheath: Grey

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
				lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
2x1.0 re	1/1.13	0.6	1.2	7.6	8.8	93	-	18.1	-	13	-	15	-
2x1.0 rm	3/0.65	0.6	1.2	7.6	8.8	102	-	18.1	-	13	-	15	-
2x1.5 re	1/1.38	0.7	1.2	8.4	10	119	108	12.1	18.1	16	11	18	13
2x1.5 rm	3/0.80	0.7	1.2	9.0	10.2	121	111	12.1	18.1	16	11	18	13
2x1.5 rm	7/0.52	0.7	1.2	9.0	10.2	121	112	12.1	18.1	16	11	18	13
2x2.5 re	1/1.78	0.8	1.2	9.6	11.5	165	134	7.41	12.1	22	16	26	18
2x2.5 rm	7/0.67	0.8	1.2	10.4	11.8	167	135	7.41	12.1	22	16	26	18
2x4 rm	7/0.85	0.8	1.2	10.5	12.5	228	178	4.61	7.41	30	21	33	23
2x6 rm	7/1.04	0.8	1.2	11.5	14.0	294	219	3.08	4.61	37	26	43	30
2x10 rm	7/1.35	1.0	1.4	15.0	17.5	485	359	1.83	3.08	50	35	60	42
2x16 rm	7/1.70	1.0	1.4	16.5	20.0	673	471	1.15	1.91	66	43	80	52
2x25 rm	7/2.14	1.2	1.4	20.5	24.0	1004	685	0.727	1.2	75	49	88	57
2x35 rm	19/1.53	1.2	1.6	23.0	27.5	1347	906	0.524	0.868	92	60	108	70

BYM/ BAYM

PVC Insulated, PVC Sheathed Three Core Cable

RATED VOLTAGE
U◦/U: 300/500V

APPLICATION

For fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

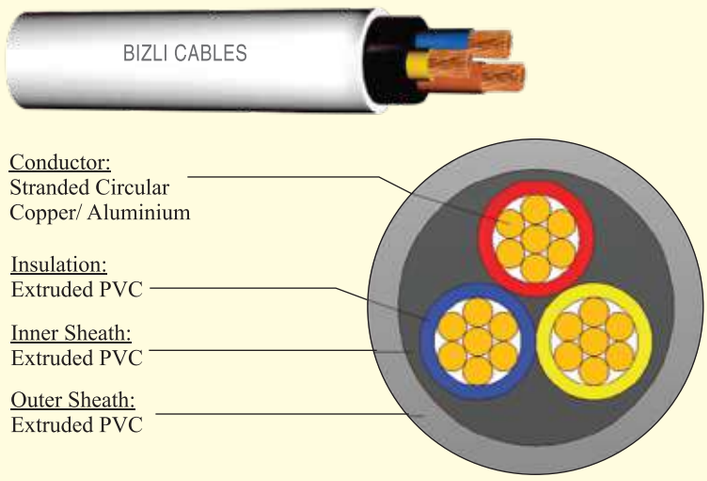
REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-4, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded/ compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655



Inner Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Grey

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
				lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x1.0 re	1/1.13	0.6	1.2	7.8	9.2	106	-	18.1	-	11	-	12	-
3x1.0 rm	3/0.65	0.6	1.2	7.8	9.2	115	-	18.1	-	11	-	12	-
3x1.5 re	1/1.38	0.7	1.2	8.8	10.5	139	115	12.1	18.1	15	10	16	11
3x1.5 rm	3/0.80	0.7	1.2	9.2	10.8	142	117	12.1	18.1	15	10	16	11
3x1.5 rm	7/0.52	0.7	1.2	9.2	10.8	142	118	12.1	18.1	15	10	16	11
3x2.5 re	1/1.78	0.8	1.2	10.0	12.0	195	149	7.41	12.1	20	14	22	15
3x2.5 rm	7/0.67	0.8	1.2	10.5	12.5	198	151	7.41	12.1	20	14	22	15
3x4 rm	7/0.85	0.8	1.2	11.0	13.0	268	193	4.61	7.41	27	19	30	21
3x6 rm	7/1.04	0.8	1.4	12.5	15.5	386	273	3.08	4.61	33	23	37	26
3x10 rm	7/1.35	1.0	1.4	15.5	19.0	590	400	1.83	3.08	46	32	51	36
3x16 rm	7/1.70	1.0	1.4	18.0	21.5	856	553	1.15	1.91	58	38	67	44
3x25 rm	7/2.14	1.2	1.6	22.0	26.0	1272	794	0.727	1.2	66	43	77	50
3x35 rm	19/1.53	1.2	1.6	24.5	29.0	1685	1023	0.524	0.868	81	53	90	59

BYM/ BAYM

PVC Insulated, PVC Sheathed Four Core Cable

RATED VOLTAGE
U◦/U: 300/500V

APPLICATION

For fixed installations in dry or damp premises clipped direct to a surface or on a cable tray unenclosed and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

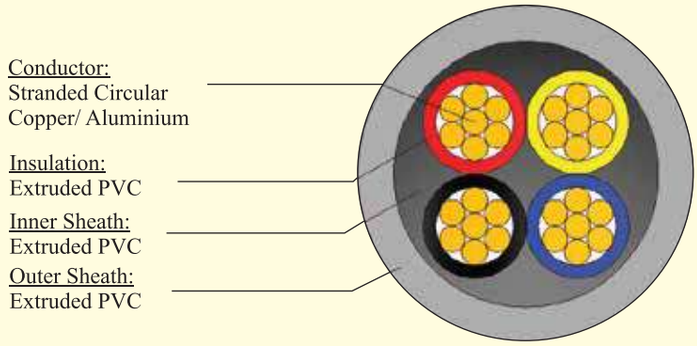
REFERENCE STANDARD

BS 6004, BDS 900, IEC 60227-4, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded/ compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655



Inner Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Grey

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall diameter		Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
				lower limit	upper limit	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x1.0 re	1/1.13	0.6	1.2	8.4	9.8	124	-	18.1	-	11	-	12	-
4x1.0 rm	3/0.65	0.6	1.2	8.4	9.8	151	-	18.1	-	11	-	12	-
4x1.5 re	1/1.38	0.7	1.2	9.6	11.5	164	135	12.1	18.1	15	10	16	11
4x1.5 rm	3/0.80	0.7	1.2	10.0	12.0	168	136	12.1	18.1	15	10	16	11
4x1.5 rm	7/0.52	0.7	1.2	10.0	12.0	168	137	12.1	18.1	15	10	16	11
4x2.5 re	1/1.78	0.8	1.2	11.0	13.0	230	175	7.41	12.1	20	14	22	15
4x2.5 rm	7/0.67	0.8	1.2	11.5	13.5	235	161	7.41	12.1	20	14	22	15
4x4 rm	7/0.85	0.8	1.4	12.0	14.5	342	241	4.61	7.41	27	19	30	21
4x6 rm	7/1.04	0.8	1.4	14.0	17.0	464	314	3.08	4.61	33	23	37	26
4x10 rm	7/1.35	1.0	1.4	17.0	20.5	719	466	1.83	3.08	46	32	51	36
4x16 rm	7/1.70	1.0	1.4	20.0	23.5	1051	647	1.15	1.91	58	38	67	44
4x25 rm	7/2.14	1.2	1.6	24.5	28.5	1600	963	0.727	1.2	66	43	77	50
4x35 rm	19/1.53	1.2	1.6	27.0	32.0	2085	1202	0.524	0.868	81	53	90	59

BYFY/ BAYFY

PVC Insulated, PVC Sheathed Flat Twin Core Cable

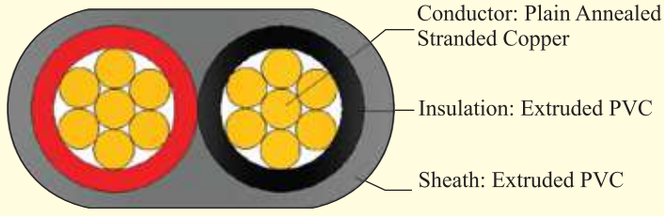
RATED VOLTAGE
U◦/U: 300/500V

APPLICATION

Used in dry or damp locations for fixed installation by fixing over walls, installation on boards and embedded in plaster and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6004, BDS 900, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), Type 6 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red & Black

Sheath: Grey

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx. dimension of cable	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
2x1.0 re	1/1.13	0.6	0.9	6.9x4.4	55	-	18.1	-	13	-	15	-
2x1.0 rm	3/0.65	0.6	0.9	7.4x4.6	60	-	18.1	-	13	-	15	-
2x 1.3 rm	3/0.74	0.7	0.9	8.2x5.0	71	54	14.03	22.95	15	9	17	11
2x1.5 re	1/1.38	0.7	0.9	7.8x4.8	72	55	12.1	18.1	16	13	18	15
2x1.5 rm	3/0.80	0.7	0.9	8.2x5.0	77	58	12.1	18.1	16	13	18	15
2x1.5 rm	7/0.52	0.7	0.9	8.5x5.2	77	59	12.1	18.1	16	13	18	15
2x2.0 rm	3/0.91	0.7	0.9	9.0x5.4	92	66	9.11	15.18	20	14	23	16
2x2.5 re	1/0.78	0.8	1.0	9.2x5.6	104	76	7.41	12.1	22	16	26	20
2x2.5 rm	7/0.67	0.8	1.0	9.7x5.8	109	80	7.41	12.1	22	16	26	20
2x3.0 rm	7/0.74	0.8	1.0	10.1x6.0	125	89	5.99	9.84	24	17	28	21
2x4.0 rm	7/0.85	0.8	1.0	10.7x6.4	150	102	4.61	7.41	30	22	33	26
2x4.5 rm	7/0.91	0.8	1.0	11.0x6.5	164	107	3.89	6.51	32	23	38	27
2x6.0 rm	7/1.04	0.8	1.1	12.1x7.2	205	130	3.08	4.61	37	27	43	35
2x10 rm	7/1.35	1.0	1.2	15x8.7	320	196	1.83	3.08	50	37	60	47
2x16 rm	7/1.7	1.0	1.3	17.3x10	470	265	1.15	1.91	66	49	80	62

BYFY/ BAYFY

PVC Insulated, PVC Sheathed Flat Three Core Cable

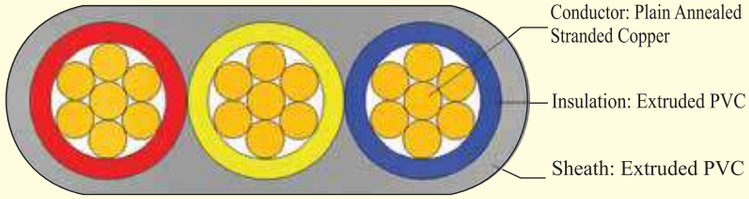
RATED VOLTAGE
U◦/U: 300/500V

APPLICATION

Used in dry or damp locations for fixed installation by fixing over walls, installation on boards and embedded in plaster and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6004, BDS 900, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), Type 6 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Grey

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx. dimension of cable	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in conduit		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x1.0 re	1/1.13	0.6	0.9	9.4x4.4	78	-	18.1	-	11	-	12	-
3x1.0 rm	3/0.65	0.6	0.9	10.2x4.6	84	-	18.1	-	11	-	12	-
3x1.5 re	1/1.38	0.7	0.9	10.7x4.8	104	75	12.1	18.1	15	12	16	13
3x1.5 rm	3/0.80	0.7	0.9	11.5x5.1	110	80	12.1	18.1	15	12	16	13
3x1.5 rm	7/0.52	0.7	0.9	11.7x5.2	110	80	12.1	18.1	15	12	16	13
3x2.5 re	1/1.78	0.8	0.9	12.7x5.6	152	106	7.41	12.1	20	16	22	17
3x2.5 rm	7/0.67	0.8	1.0	13. 4x5.8	160	114	7.41	12.1	20	16	22	17
3x4 rm	7/0.85	0.8	1.1	15.2x6.6	226	150	4.61	7.41	33	24	30	25
3x6 rm	7/1.04	0.8	1.1	16.9x7.2	300	184	3.08	4.61	37	30	37	30
3x10 rm	7/1.35	1.0	1.2	21.2x8.7	470	280	1.83	3.08	48	35	48	35
3x16 rm	7/1.7	1.0	1.3	24.6x10	685	385	1.15	1.91	64	47	64	47

BYFYE

PVC Insulated, PVC Sheathed Flat Twin Core Cable with ECC conductor

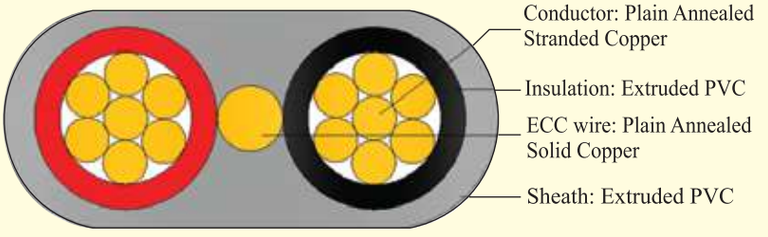
RATED VOLTAGE
U◦/U: 300/500V

APPLICATION

Used in dry or damp locations for fixed installation by fixing over walls, installation on boards and embedded in plaster and also for use in non-metallic conduit.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6004, BDS 900, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded circular Copper, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

ECC Conductor: Plain annealed Solid/ stranded circular Copper, Class-1 & 2 as per IEC 60228

Outer Sheath: Poly vinyl Chloride (PVC), Type 6 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red & Black

Sheath: Grey

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx dimension of cable	No. & nominal Diameter of wires in ECC	Approx. weight of cable	Max. DC Resistance of conductor at 20ºC	Current rating	
								Enclosed in conduit at 35°C	Clipped to Surface of cable try at 35°C
core x mm^2	nos./mm	mm	mm	mm	nos/mm	Kg/Km	Ω/km	amps	amps
2 x1.0 re	1/1.13	0.6	0.9	8.1x4.4	1/1.13	68	18.1	13	15
2x1.5 re	1/1.38	0.7	0.9	9x4.8	1/1.13	86	12.1	16	18
2x2.5 re	1/1.78	0.8	1.0	10.3x5.6	1/1.13	120	7.41	22	26
2x4.0 rm	7/0.85	0.8	1.0	12.1x6.4	1/1.38	175	4.61	30	33
2x6.0 rm	7/1.04	0.8	1.1	13.9x7.2	1/1.78	242	3.08	37	43
2x10 rm	7/1.35	1.0	1.2	17.5x8.7	7/0.85	370	1.83	50	60
2x16 rm	7/1.7	1.0	1.3	20.5x10	7/1.04	540	1.15	66	80

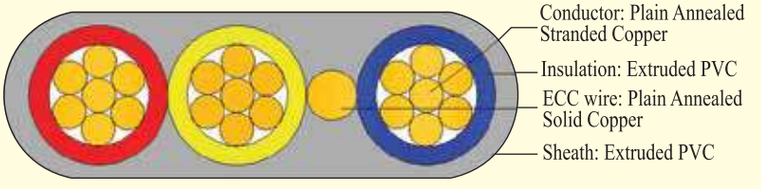
BYFYE

RATED VOLTAGE
U◦/U: 300/500V

PVC Insulated, PVC Sheathed Flat Three Core Cable with ECC conductor

APPLICATION

Used in dry or damp locations for fixed installation by fixing over walls, installation on boards and embedded in plaster and also for use in non-metallic conduit.



FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 6004, BDS 900, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Solid/ stranded circular Copper, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

ECC Conductor: Plain annealed Solid/ stranded circular Copper, Class-1 & 2 as per IEC 60228

Outer Sheath: Poly vinyl Chloride (PVC), Type 6 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Grey

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx dimension of cable	No. & nominal Diameter of wires in ECC	Approx. weight of cable	Max. DC Resistance of conductor at 20ºC	Current rating	
								Enclosed in conduit at 35°C	Clipped to Surface of cable try at 35°C
core x mm^2	nos./mm	mm	mm	mm	nos/mm	Kg/Km	Ω/km	amps	amps
3x1.0 re	1/1.13	0.6	0.9	10.5x4.4	1/1.13	91	18.1	11	12
3x1.5 re	1/1.38	0.7	0.9	11.8x4.8	1/1.13	118	12.1	15	16
3x2.5 re	1/1.78	0.8	1.0	13.8x5.6	1/1.13	170	7.41	20	22
3x4 rm	7/0.85	0.8	1.1	15.7x6.6	1/1.38	236	4.61	33	30
3x6 rm	7/1.04	0.8	1.1	17.6x7.2	1/1.78	318	3.08	37	37
3x10 rm	7/1.35	1.0	1.2	22.2x8.7	7/0.85	506	1.83	48	48
3x16 rm	7/1.7	1.0	1.3	25.8x10	7/1.04	740	1.15	64	64

Flexible

RATED VOLTAGE
U_o/U: 300/500V

PVC Insulated, Non-sheathed Single Core Flexible Cable

APPLICATION

For inner wiring of equipment, distributor, switchboards and also for protective laying to the lightings with a nominal voltage up to 500V.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.0 KV
Flame Retardant as per IEC 60332

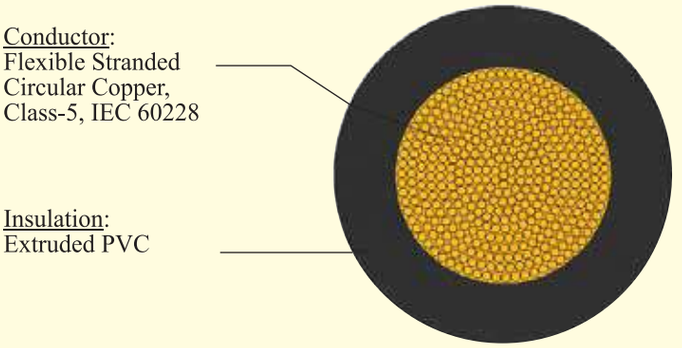
REFERENCE STANDARD

BS 6004, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655
FR & FRLS Insulation available on request.



COLOR

Insulation: Red, Yellow, Blue, Black, Green, Yellow/Green.

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	No. of strand & diameter of wires	Nominal thickness of insulation	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In conduit	In air
mm^2	nos./mm	nos./inch	mm	mm	mm	kg/km	Ω/km	amps	amps
0.4 rm	14/0.193	14/.0076	0.6	2.0	2.4	8.0	47.33	2	3
0.5 rm	16/0.20	-	0.6	2.1	2.5	9.0	39.0	3	4
0.65 rm	23/0.193	23/.0076	0.6	2.2	2.6	11.1	28.79	5	6
0.75 rm	24/0.20	-	0.6	2.2	2.7	12	26.0	6	7
1.0 rm	32/0.20	-	0.6	2.4	2.8	15	19.5	9	10
1.2 rm	40/0.193	40/.0076	0.6	2.5	3	16.9	16.56	11	13
2.0 rm	70/0.193	70/.0076	0.7	3.2	3.7	27	9.46	16	18
3.0 rm	110/0.193	110/.0076	0.8	3.7	4.5	42	6.01	22	24

Flexible (T/T)

RATED VOLTAGE, Uo/U: 300/500V

PVC Insulated Twisted Twin (T/T) Flexible Cable

APPLICATION

Suitable for dry place where mechanical stress do not exist at the connections of portable equipment.

REFERENCE STANDARD

BS 6004, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Twisting: Two cores twisted with suitable lay.

FR & FRLS Insulation available on request.

COLOR

Insulation: Red & Black

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	No. of strand & diameter of wires	Nominal thickness of insulation	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In conduit	In air
Core x mm2	nos./mm	nos./inch	mm	mm	mm	kg/km	Ω/km	amps	amps
2x0.40 rm	14/0.193	14/.0076	0.6	2	2.4	16.0	47.33	2	3
2x0.65 rm	23/0.193	23/.0076	0.6	2.2	2.6	22.2	28.79	5	6
2x1.2 rm	40/0.193	40/.0076	0.6	2.5	3	33.9	16.56	11	13
2x2.0 rm	70/0.193	70/.0076	0.6	3.2	3.7	54	9.46	16	18

Flexible (F/T)

RATED VOLTAGE, Uo/U: 300/500V

PVC Insulated, PVC Sheathed Flat Twin (F/T) Two Core Flexible Cable

APPLICATION

Suitable for dry place where mechanical stress do not exist at the connections of portable equipment.

REFERENCE STANDARD

BS 6500, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI2 temperature rating 70ºC as per BS 7655

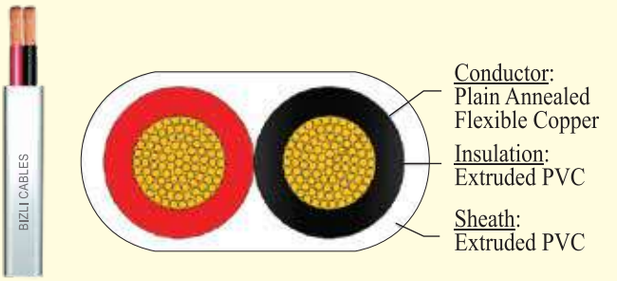
Sheath: Poly vinyl Chloride (PVC), TM2 temperature rating 70ºC as per BS 7655

FR & FRLS Insulation available on request.

COLOR

Insulation: Red & Black

Sheath: White



PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal Thickness of Insulation	Nominal thickness of Sheath	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In conduit	In air
Core x mm2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
2x0.40 rm	14/0.193	0.6	0.8	3.3x5.4	4.3x6.9	36.0	47.33	3	4
2x0.65 rm	23/0.193	0.6	0.8	3.6x5.9	4.5x7.1	45.0	28.79	5	6

Flexible Cord

RATED VOLTAGE
Uo/U:300/500V

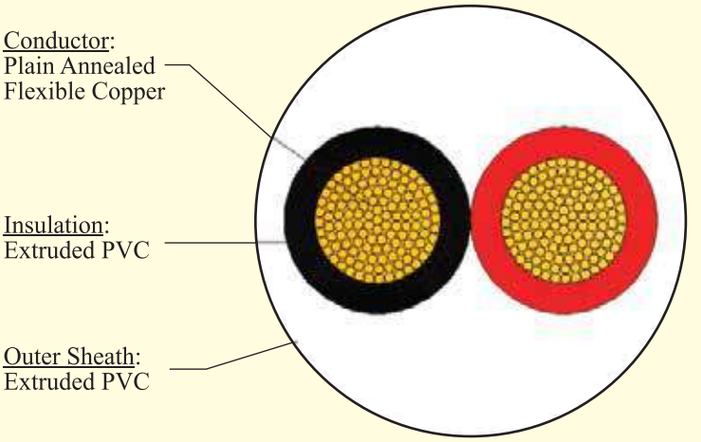
PVC Insulated, PVC Sheathed Two Core Flexible Cord

APPLICATION

For external supply connection of portable appliances and in/on light fittings where low mechanical stress and increased flexibility is required.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.0 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6500, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI2 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM2 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red & Black

Sheath: White

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In conduit	In air
Core xmm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
2 x 0.4 rm	14 / 0.193	0.6	0.8	5.2	6.6	49	47.33	3	4
2 x 0.5 rm	16 / 0.20	0.6	0.8	5.4	6.8	54	39.0	3	4
2 x 0.65 rm	23 / 0.193	0.6	0.8	5.6	7.1	60	28.79	6	7
2 x 0.75 rm	24 / 0.20	0.6	0.8	5.7	7.2	64	26.0	7	8
2 x 1.0 rm	32 / 0.20	0.6	0.8	5.9	7.5	74	19.5	10	11
2 x 1.2 rm	40 / 0.193	0.6	0.8	6.3	8.0	78	16.56	13	15
2 x 1.5 rm	30 / 0.25	0.7	0.8	6.8	8.6	99	13.3	15	17
2 x 2.0 rm	70 / 0.193	0.7	1.0	8.1	9.6	127	9.46	18	20
2 x 2.5 rm	50 / 0.25	0.8	1.0	8.4	10.6	151	7.98	20	22
2 x 3.0 rm	110 / 0.193	0.8	1.1	9.8	11.2	174	6.01	24	26
2 x 4.0 rm	56 / 0.30	0.8	1.1	10.6	11.7	200	4.95	25	27

Flexible Cord

RATED VOLTAGE
U_o/U: 300/500V

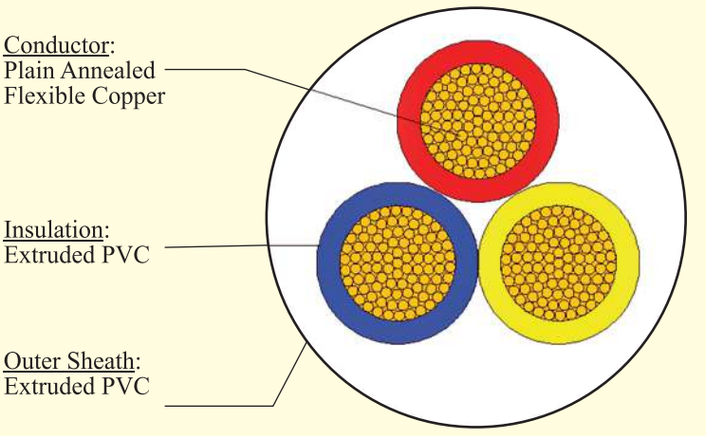
PVC Insulated, PVC Sheathed Three Core Flexible Cord

APPLICATION

For external supply connection of portable appliances and in/on light fittings where low mechanical stress and increased flexibility is required.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.0 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6500, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI2 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM2 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Bluek

Sheath: White

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In Conduit	In air
Core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
3 x 0.4 rm	14 / 0.193	0.6	0.8	5.6	7.0	58	47.33	2	3
3 x 0.5 rm	16 / 0.20	0.6	0.8	5.8	7.2	64	39.0	3	4
3 x 0.65 rm	23 / 0.193	0.6	0.8	5.9	7.4	71	28.79	6	7
3 x 0.75 rm	24 / 0.20	0.6	0.8	6	7.6	76	26.0	7	8
3 x 1.0 rm	32 / 0.20	0.6	0.8	6.3	8.0	88	19.5	10	11
3 x 1.2 rm	40 / 0.193	0.6	0.9	6.9	8.7	99	16.56	13	15
3 x 1.5 rm	30 / 0.25	0.7	0.9	7.4	9.4	124	13.3	15	17
3 x 2.0 rm	70 / 0.193	0.7	1.0	8.6	10.4	160	9.46	18	20
3 x 2.5 rm	50 / 0.25	0.8	1.0	9.2	11.4	183	7.98	20	22
3 x 3.0 rm	110 / 0.193	0.8	1.1	10.4	12.0	222	6.01	24	26
3 x 4.0 rm	56 / 0.30	0.8	1.2	11.0	12.6	254	4.95	25	27

Flexible Cord

RATED VOLTAGE
U_o/U: 300/500V

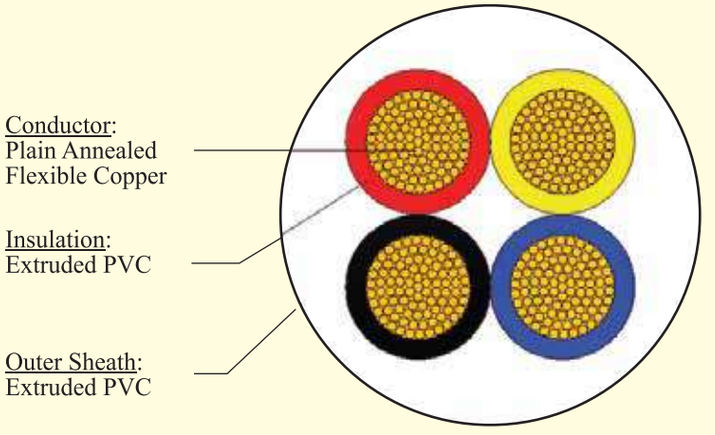
PVC Insulated, PVC Sheathed Four Core Flexible Cord

APPLICATION

For external supply connection of portable appliances and in/on light fittings where low mechanical stress and increased flexibility is required.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Resistance to Solar Radiation
AC Test voltage 1.5 to 2.0 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

BS 6500, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI2 temperature rating 70ºC as per BS 7655

Outer Sheath: Poly vinyl Chloride (PVC), TM2 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: White

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Overall Diameter		Approximate weight	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C	
				Lower Limit	Uper Limit			In Conduit	In Air
Core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
4 x 0.4 rm	14 / 0.193	0.6	0.8	6.3	7.6	68	47.33	2	3
4 x 0.5 rm	16 / 0.20	0.6	0.8	6.4	7.8	77	39.0	3	4
4 x 0.65 rm	23 / 0.193	0.6	0.8	6.5	8.1	85	28.79	6	7
4 x 0.75 rm	24 / 0.20	0.6	0.8	6.6	8.3	93	26.0	7	8
4 x 1.0 rm	32 / 0.20	0.6	0.9	7.1	9.0	113	19.5	10	11
4 x 1.2 rm	40 / 0.193	0.6	1.0	8.0	9.4	124	16.56	13	15
4 x 1.5 rm	30 / 0.25	0.7	1.0	8.4	10.5	158	13.3	15	17
4 x 2.0 rm	70 / 0.193	0.7	1.1	9.5	11.4	194	9.46	18	20
4 x 2.5 rm	50 / 0.25	0.8	1.1	10.1	12.5	231	7.98	20	22
4 x 3.0 rm	110 / 0.193	0.8	1.2	11.8	13.2	274	6.01	24	26
4 x 4.0 rm	56 / 0.30	0.8	1.2	12.4	13.8	315	4.95	25	27

PVC INSULATED LT CABLE

NYY/ NAYY

PVC Insulated & PVC Sheathed Single Core Cable

RATED VOLTAGE
U◦/U (Um): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

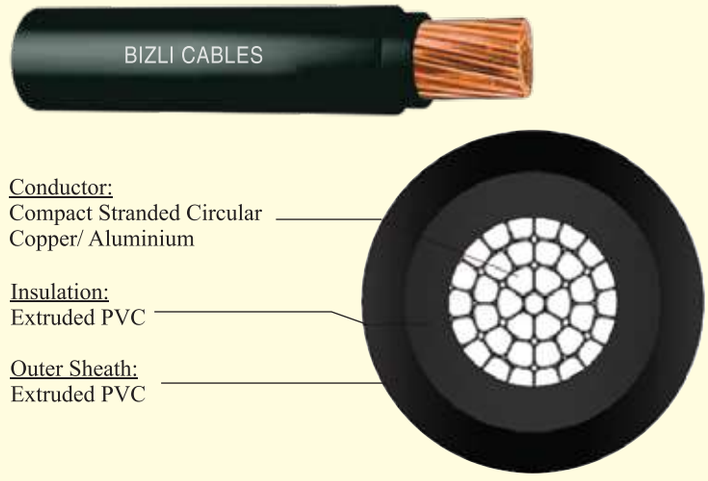
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

VDE 0271/ 3.69

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded/ Compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1
Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1
FR & FRLS Sheath available on request.

COLOR

Insulation: Black
Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx. cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x1.5 re	1/1.38	0.8	1.8	6.6	65	56	12.1	18.1	27	-	22	-
1x1.5 rm	7/0.52	0.8	1.8	6.8	68	58	12.1	18.1	27	-	22	-
1x2.5 re	1/1.78	0.8	1.8	7.2	80	66	7.41	12.1	36	-	30	-
1x2.5 rm	7/0.67	0.8	1.8	7.4	84	68	7.41	12.1	36	-	30	-
1x4 rm	7/0.85	1.0	1.8	8.2	112	86	4.61	7.41	47	37	39	31
1x6 rm	7/1.04	1.0	1.8	8.7	140	98	3.08	4.61	59	48	50	41
1x10 rm	7/1.35	1.0	1.8	9.7	185	121	1.83	3.08	78	60	69	53
1x16 rm	7/1.70	1.0	1.8	10.7	255	150	1.15	1.91	100	78	94	73
1x16 rm	19/1.04	1.0	1.8	11.0	260	155	1.15	1.91	100	78	94	73
1x25 rm	7/2.14	1.2	1.8	12.4	365	202	0.727	1.2	130	101	125	97
1x25 rm	19/1.3	1.2	1.8	12.8	375	210	0.727	1.2	130	101	125	97
1x35 rm	min. 6	1.2	1.8	13.7	470	248	0.524	0.868	155	120	160	124
1x50 rm	min. 6	1.4	1.8	15.6	620	320	0.387	0.641	185	144	195	151
1x70 rm	min. 12	1.4	1.8	17.3	845	400	0.268	0.443	225	175	245	190
1x95 rm	min. 15	1.6	1.8	19.4	1100	520	0.193	0.32	270	210	300	232
1x120 rm	min. 18/15	1.6	1.8	21	1340	615	0.153	0.253	310	240	350	272
1x150 rm	min. 18/15	1.8	1.8	23.1	1650	750	0.124	0.206	350	270	405	314
1x185 rm	min. 30	2.0	2.0	25.6	2026	915	0.0991	0.164	390	302	460	357
1x240 rm	min. 34/30	2.2	2.0	28.6	2620	1140	0.0754	0.125	450	349	555	430
1x300 rm	min. 34/30	2.4	2.0	31.3	3240	1380	0.0601	0.100	515	386	640	448
1x400 rm	min. 53	2.6	2.2	35.3	4220	1800	0.047	0.0778	585	439	770	540
1x500 rm	min. 53	2.8	2.2	38.0	5250	2200	0.0366	0.0605	680	510	900	630
1x630 rm	min. 53	2.8	2.2	42.0	6500	2650	0.0283	0.0469	800	600	1030	721
1x800 rm	min. 53	2.8	2.4	46.2	8150	3195	0.0221	0.0367	945	708	1160	812
1x1000rm	min. 53	3.0	2.6	51.1	10230	3850	0.0176	0.0291	1095	821	1310	917

YY/ AYY

PVC Insulated & PVC Sheathed Single Core Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

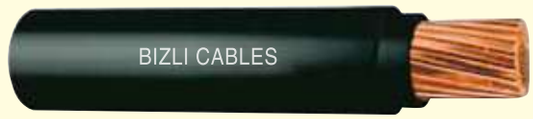
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

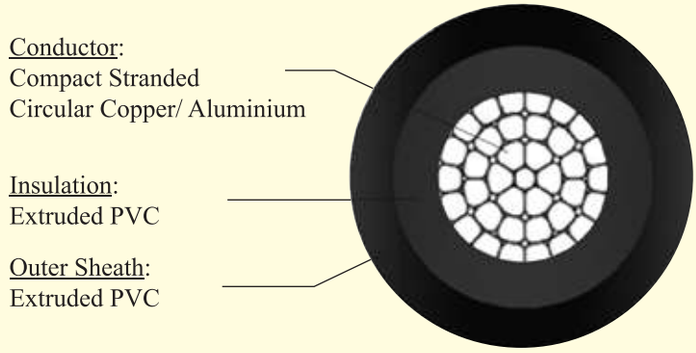
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276/ 603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded/ Compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228





Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1
Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1
FR & FRLS Sheath available on request.

COLOR

Insulation: Black
Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x1.5 re	1/1.38	0.8	1.4	6.0	50	-	12.1	18.1	27	-	22	-
1x1.5 rm	7/0.52	0.8	1.4	6.3	53	-	12.1	18.1	27	-	22	-
1x2.5 re	1/1.78	0.8	1.4	6.5	65	-	7.41	12.1	36	-	30	-
1x2.5 rm	7/0.67	0.8	1.4	6.7	68	-	7.41	12.1	36	-	30	-
1x 4 rm	7/0.85	1.0	1.4	7.7	95	64	4.61	7.41	47	37	39	31
1x 6 rm	7/1.04	1.0	1.4	8.4	120	75	3.08	4.61	59	48	50	41
1x10 rm	7/1.35	1.0	1.4	9.2	171	97	1.83	3.08	78	60	69	53
1x16 rm	7/1.70	1.0	1.4	10.5	246	127	1.15	1.91	100	78	94	73
1x16 rm	19/1.04	1.0	1.4	10.6	250	130	1.15	1.91	100	78	94	73
1x25 rm	7/2.14	1.2	1.4	12.2	348	190	0.727	1.2	130	101	125	97
1x25 rm	19/1.3	1.2	1.4	12.8	355	355	0.727	1.2	130	101	125	97
1x35 rm	min. 6	1.2	1.4	12.7	453	218	0.524	0.868	155	120	160	124
1x50 rm	min. 6	1.4	1.4	14.5	624	290	0.387	0.641	185	144	195	152
1x70 rm	min. 12	1.4	1.4	16.1	831	362	0.268	0.443	225	175	245	191
1x95 rm	min. 15	1.6	1.5	18.2	1104	488	0.193	0.32	270	210	300	233
1x120 rm	min. 18/15	1.6	1.5	19.7	1357	580	0.153	0.253	310	240	350	272
1x150 rm	min. 18/15	1.8	1.6	21.9	1689	708	0.124	0.206	350	270	405	314
1x185 rm	min. 30	2.0	1.7	24.1	2070	875	0.0991	0.164	390	302	460	358
1x240 rm	min. 34/30	2.2	1.8	26.9	2650	11 15	0.0754	0.125	450	349	555	431
1x300 rm	min. 34/30	2.4	1.9	29.8	3289	1375	0.0601	0.100	515	386	640	448
1x400 rm	min. 53	2.6	2.0	33.5	4314	1720	0.047	0.0778	585	439	770	540
1x500 rm	min. 53	2.8	2.1	38.0	5350	2125	0.0366	0.0605	680	510	900	630
1x630 rm	min. 53	2.8	2.2	42.0	6780	2620	0.0283	0.0469	800	600	1030	721
1x800 rm	min. 53	2.8	2.3	46.2	8510	3195	0.0221	0.0367	945	708	1160	812
1x1000 rm	min. 53	3.0	2.4	51.1	10530	3890	0.0176	0.0291	1095	821	1310	917

NYY/ NAYY
YY/ AYY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Two Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

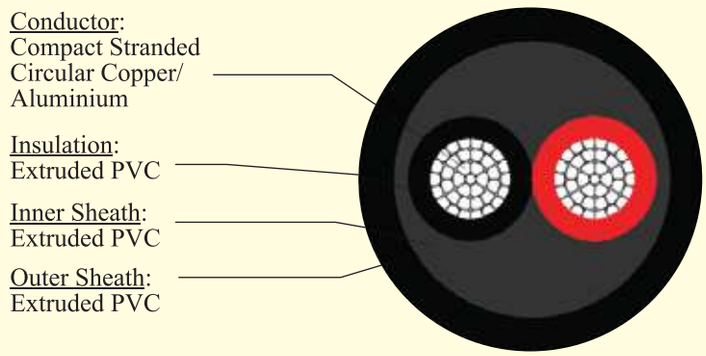
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded/ Compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A



temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red & Black
Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
2x1.5 re	1/1.38	0.8	1.8	11.0	165	-	12.1	18.1	25	-	19	-
2x1.5 rm	7/0.52	0.8	1.8	11.2	170	-	12.1	18.1	25	-	19	-
2x2.5 re	1/1.78	0.8	1.8	12.4	205	-	7.41	12.1	34	-	27	-
2x2.5 rm	7/0.67	0.8	1.8	12.8	215	-	7.41	12.1	34	-	27	-
2x4 rm	7/0.85	1.0	1.8	14.5	305	223	4.61	7.41	44	35	35	28
2x6 rm	7/1.04	1.0	1.8	15.6	375	257	3.08	4.61	55	45	45	37
2x10 rm	7/1.35	1.0	1.8	17.5	509	314	1.83	3.08	74	57	62	48
2x16 rm	7/1.70	1.0	1.8	19.5	691	390	1.15	1.91	97	75	84	65
2x25 rm	7/2.14	1.2	1.8	23.5	1044	518	0.727	1.2	125	97	110	86
2x35 rm	19/1.53	1.2	1.8	26.0	1330	620	0.524	0.868	150	117	140	109

NYY/ NAYY
YY/ AYY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

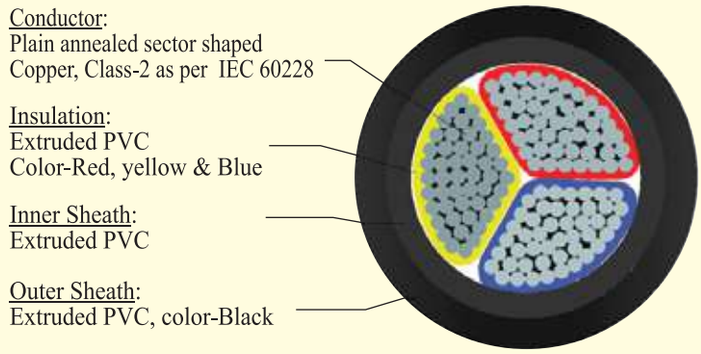
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x1.5 re	1/1.38	0.8	1.8	11.5	195	-	12.1	18.1	22.0	-	16	-
3x1.5 rm	7/0.52	0.8	1.8	11.8	200	-	12.1	18.1	22.0	-	16	-
3x2.5 re	1/1.78	0.8	1.8	12.7	250	-	7.41	12.1	30.0	-	23	-
3x2.5 rm	7/0.67	0.8	1.8	13.2	260	-	7.41	12.1	30.0	-	23	-
3x4 rm	7/0.85	1.0	1.8	15.0	360	260	4.61	7.41	38	30	32	25
3x6 rm	7/1.04	1.0	1.8	16.4	460	305	3.08	4.61	48	39	41	34
3x10 rm	7/1.35	1.0	1.8	18.5	625	379	1.83	3.08	64	49	56	43
3x16 rm	7/1.70	1.0	1.8	21.0	920	480	1.15	1.91	83	64	75	58
3x25 rm	7/2.14	1.2	1.8	25.0	1320	652	0.727	1.2	110	86	98	76
3x35 sm	min. 6	1.2	1.8	24.2	1400	804	0.524	0.868	130	101	120	93
3x50 sm	min. 6	1.4	1.8	25.9	1815	1045	0.387	0.641	155	120	150	116
3x70 sm	min. 12	1.4	2.0	29.2	2444	1325	0.268	0.443	190	148	190	148
3x95 sm	min. 15	1.6	2.1	33.4	3350	1735	0.193	0.320	225	175	230	179
3x120 sm	min. 18/15	1.6	2.2	36.3	4110	2040	0.153	0.253	260	202	270	210
3x150 sm	min. 18/15	1.8	2.3	39.5	5100	2475	0.124	0.206	295	229	305	237
3x185 sm	min. 30	2.0	2.5	43.5	6260	3040	0.0991	0.164	330	257	350	272
3x240 sm	min. 34/30	2.2	2.7	48.8	7900	3795	0.0754	0.125	385	299	410	318
3x300 sm	min. 34/30	2.4	2.9	54.1	10000	4700	0.0601	0.100	425	329	470	364

NYY/ NAYY
YY/ AYY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three & Half Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

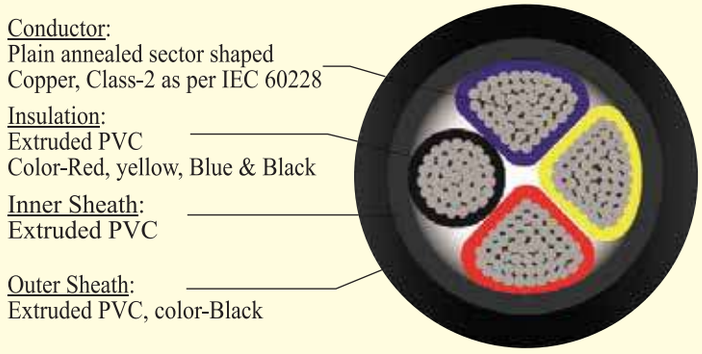
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	1.2	1.8	27.0	1400	910	0.727	1.2	110	86	98	76
	7/1.7	1.0					1.15	1.91				
3x35+16 sm/rm	min. 6	1.2	1.8	26.2	1580	920	0.524	0.868	130	101	120	93
	7/1.7	1.0					1.15	1.91				
3x50+25 sm/rm	min. 6	1.4	1.9	28.5	2180	1200	0.387	0.641	155	120	150	116
	7/2.14	1.2					0.727	1.2				
3x70+35 sm/rm	min. 12	1.4	2.0	32.5	2910	1505	0.268	0.443	190	148	190	148
	min. 6	1.2					0.524	0.868				
3x95+50 sm/rm	min. 15	1.6	2.2	38.0	3950	2000	0.193	0.320	225	175	230	179
	min. 6	1.4					0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.6	2.3	40.8	5050	2390	0.153	0.253	260	202	270	210
	min. 12	1.4					0.268	0.443				
3x150+70 sm/rm	min. 18/15	1.8	2.4	45.0	6020	2830	0.124	0.206	295	229	305	237
	min. 12	1.4					0.268	0.443				
3x185+95 sm/rm	min. 30	2.0	2.6	50.5	7450	3510	0.0991	0.164	330	257	350	272
	min. 15	1.6					0.193	0.320				
3x240+120 sm/rm	min. 34/30	2.2	2.8	56.0	9650	4360	0.0754	0.125	385	299	410	318
	min. 18/15	1.6					0.153	0.253				
3x300+150 sm/rm	min. 34/30	2.4	3.0	63.0	12100	5404	0.0601	0.100	425	329	470	364
	min. 18/15	1.8					0.124	0.206				

NYY/ NAYY
YY/ AYY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Four Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

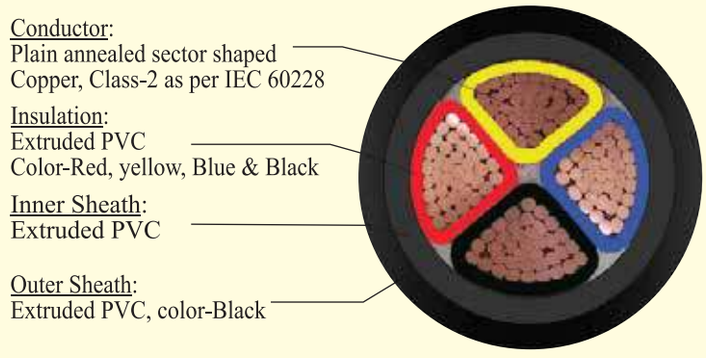
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x1.5 re	1/1.38	0.8	1.8	12.5	230		12.1	18.1	22		16	
4x1.5 rm	7/0.52	0.8	1.8	13.0	235		12.1	18.1	22		16	
4x2.5 re	1/1.78	0.8	1.8	14.0	305		7.41	12.1	30		23	
4x2.5 rm	7/0.67	0.8	1.8	14.6	312		7.41	12.1	30		23	
4x4 rm	7/0.85	1.0	1.8	16.2	430	290	4.61	7.41	38	30	32	25
4x6 rm	7/1.04	1.0	1.8	17.5	540	345	3.08	4.61	48	39	41	34
4x10 rm	7/1.35	1.0	1.8	20.0	760	480	1.83	3.08	64	49	56	43
4x16 rm	7/1.70	1.0	1.8	23.2	1135	660	1.15	1.91	83	64	75	58
4x25 rm	7/2.14	1.2	1.8	27.6	1600	900	0.727	1.2	110	86	98	76
4x35 sm	min. 6	1.2	1.8	26.4	1800	985	0.524	0.868	130	101	120	93
4x50 sm	min. 6	1.4	1.9	29.0	2460	1310	0.387	0.641	155	120	150	116
4x70 sm	min. 12	1.4	2.1	33.5	3250	1700	0.268	0.443	190	148	190	148
4x95 sm	min. 15	1.6	2.2	38.4	4400	2190	0.193	0.320	225	175	230	179
4x120 sm	min. 18/15	1.6	2.4	41.0	5500	2605	0.153	0.253	260	202	270	210
4x150 sm	min. 18/15	1.8	2.5	45.2	6800	3210	0.124	0.206	295	229	305	237
4x185 sm	mim. 30	2.0	2.7	50.5	8350	3890	0.0991	0.164	330	257	350	272
4x240 sm	mim. 34/30	2.2	2.9	56.0	10700	4925	0.0754	0.125	385	299	410	318
4x300 sm	mim. 34/30	2.4	3.1	64.0	13200	5950	0.0601	0.10	425	329	470	364

NYYF/ YYF

PVC Insulated & PVC Sheathed Single Core Flexible Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

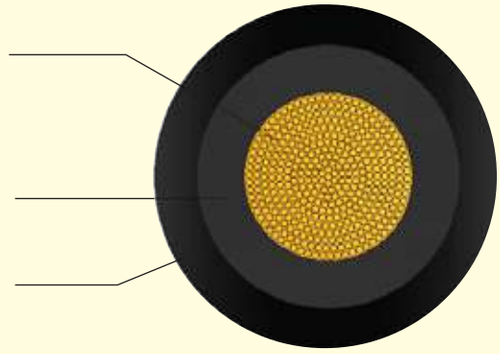
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1
Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1
FR & FRLS Sheath available on request.

COLOR

Insulation: Black
Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA	
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps
1 x 1.5 rm	30/0.25	0.8	1.8	7.2	70	13.3	24
1 x 2.5 rm	50/0.25	0.8	1.8	7.8	86	7.98	32
1 x 4 rm	56/0.3	1.0	1.8	8.5	105	4.95	41
1 x 6 rm	84/0.3	1.0	1.8	9.1	135	3.3	52
1 x 10 rm	80/0.4	1.0	1.8	10.2	185	1.91	72
1 x 1 6 rm	126/0.4	1.0	1.8	11.8	260	1.21	98
1 x 25 rm	196/0.4	1.2	1.8	13.6	370	0.78	131
1 x 35 rm	276/0.4	1.2	1.8	15.2	480	0.554	167
1 x 50 rm	396/0.4	1.4	1.8	17.6	668	0.386	204
1 x 70 rm	360/0.5	1.4	1.8	19.2	880	0.272	256
1 x 95 rm	475/0.5	1.6	1.8	21.8	1160	0.206	314
1 x 120 rm	608/0.5	1.6	1.8	24.0	1420	0.161	366
1 x 150 rm	756/0.5	1.8	1.8	26.0	1772	0.129	423
1 x 185 rm	925/0.5	2.0	2.0	28.4	2200	0.106	478
1 x 240 rm	1221/0.5	2.2	2.0	30.8	2750	0.0801	580
1 x 300 rm	1525/0.5	2.4	2.0	33.5	3400	0.0641	666
1 x 400 rm	2013/0.5	2.6	2.2	38.5	4450	0.0486	800
1 x 500 rm	1769/0.6	2.8	2.2	42.0	5550	0.0384	935

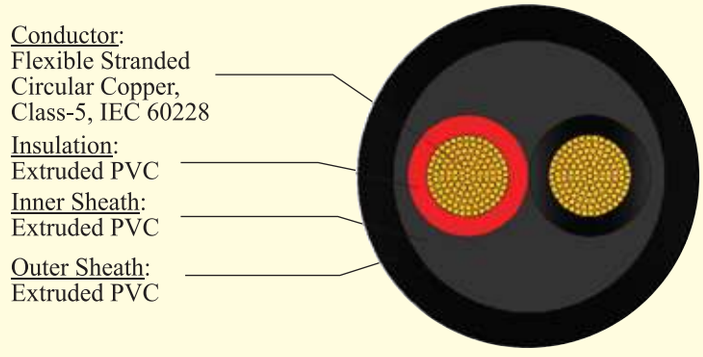
NYYF/ YYF

PVC Insulated & PVC Sheathed Two Core Flexible Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.



FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red &Black

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA	
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps
2x1.5rm	30/.25	0.8	1.8	12.0	185	13.3	20
2x2.5rm	50/.25	0.8	1.8	13.2	235	7.98	30
2 x 4 rm	56/0.3	1.0	1.8	15.0	310	4.95	37
2 x 6 rm	84/0.3	1.0	1.8	16.1	380	3.3	48
2 x 10 rm	80/0.4	1.0	1.8	18.0	510	1.91	66
2 x 16 rm	126/0.4	1.0	1.8	20.5	710	1.21	90
2 x 25 rm	196/0.4	1.2	1.8	24.2	1050	0.78	121
2 x 35 rm	276/0.4	1.2	1.8	26.4	1300	0.554	154

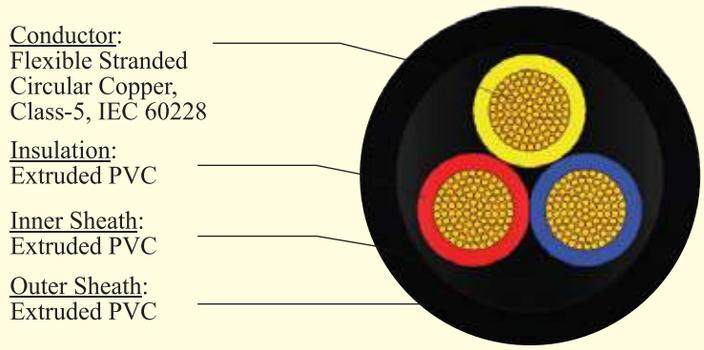
NYYF/ YYF

PVC Insulated & PVC Sheathed Three Core Flexible Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.



FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA	
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps
3 x 1.5 rm	30/.25	0.8	1.8	12.6	215	13.3	18
3 x 2.5 rm	50/.25	0.8	1.8	13.7	270	7.98	25
3 x 4 rm	56/0.3	1.0	1.8	15.6	370	4.95	33
3 x 6 rm	84/0.3	1.0	1.8	17.0	460	3.30	43
3 x10 rm	80/0.4	1.0	1.8	19.0	630	1.91	58
3 x16 rm	126/0.4	1.0	1.8	21.8	890	1.21	78
3 x 25 rm	196/0.4	1.2	1.8	25.6	1280	0.78	102
3 x 35 rm	276/0.4	1.2	1.8	28.0	1630	0.554	125
3 x 50 rm	396/0.4	1.4	2.0	33.0	2200	0.386	145

NYYF/ YYF

PVC Insulated & PVC Sheathed Four Core Flexible Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

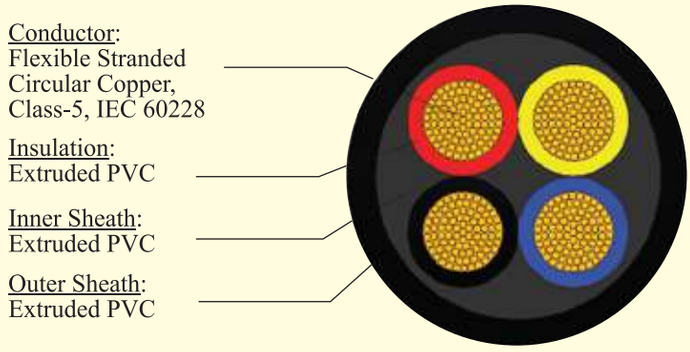
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA	
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps
4 x 1.5 rm	30/.25	0.8	1.8	13.5	250	13.3	18
4 x 2.5 rm	50/.25	0.8	1.8	14.7	315	7.98	25
4 x 4 rm	56/0.3	1.0	1.8	16.8	430	4.95	33
4 x 6 rm	84/0.3	1.0	1.8	18.4	550	3.30	43
4 x10 rm	80/0.4	1.0	1.8	20.6	750	1.91	58
4 x 16 rm	126/0.4	1.0	1.8	24.0	1080	1.21	78
4 x 25 rm	196/0.4	1.2	1.8	28.5	1580	0.780	102
4 x 35 rm	276/0.4	1.2	2.0	31.5	2050	0.554	125
4 x 50 rm	396/0.4	1.4	2.0	36.5	2800	0.386	145

NYRaY/ NAYRaY
YRaY/ AYRaY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Single Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

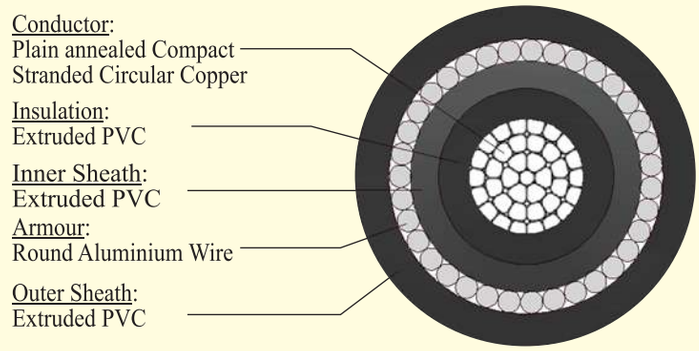
Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded/ Compacted circular Copper/ Aluminum, Class-2 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Round Aluminium wire as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Diameter of round al. armour wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x35 rm	min. 6	1.2	1.25	1.8	17.3	615	290	0.524	0.868	155	120	160	124
1x50 rm	min. 6	1.4	1.25	1.8	19.3	770	370	0.387	0.641	185	144	195	152
1x70 rm	mim. 12	1.4	1.25	1.8	20.8	1000	455	0.268	0.443	225	175	245	191
1x95 rm	mim. 15	1.6	1.25	1.8	23.3	1265	570	0.193	0.320	270	210	300	233
1x120 rm	mim. 18/15	1.6	1.6	1.8	25.5	1575	680	0.153	0.253	310	240	350	272
1x150 rm	mim. 18/15	1.8	1.6	1.8	27.5	1915	800	0.124	0.206	350	270	405	314
1x185 rm	mim. 30	2.0	1.6	1.8	29.5	2325	950	0.0991	0.164	390	302	460	358
1x240 rm	min. 34/30	2.2	1.6	1.9	32.3	2920	1195	0.0754	0.125	450	349	555	431
1x300 rm	min. 34/30	2.4	2.0	2.0	36.0	3620	1485	0.0601	0.10	515	386	640	448
1x400 rm	min. 53	2.6	2.0	2.1	40.1	4675	1873	0.0470	0.0778	585	439	770	540
1x500 rm	min. 53	2.8	2.0	2.2	43.6	5725	2270	0.0366	0.0605	680	510	900	630
1x630 rm	min. 53	2.8	2.0	2.4	47.2	7025	2760	0.0283	0.0469	800	600	1030	721
1x800 rm	min. 53	2.8	2.5	2.5	54.4	8920	3465	0.0221	0.0367	945	708	1160	812
1x1000rm	min. 53	3.0	2.5	2.7	59.3	11020	4250	0.0176	0.0291	1095	821	1310	917

NYFGbY/ NAYFGbY
YFGY/ AYFGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

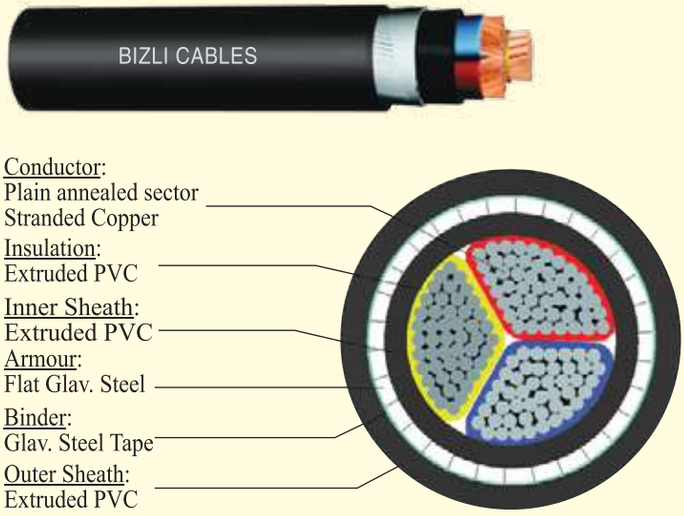
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Dimension of steel strip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25 rm	7/2. 14	1.2	4x0.8	1.8	27.0	1800	1281	0.727	1.2	110	86	98	76
3x35 sm	min. 6	1.2	4x0.8	1.8	26.0	1900	1330	0.524	0.868	130	101	120	93
3x50 sm	min. 6	1.4	4x0.8	2.0	28.0	2500	1600	0.387	0.641	155	120	150	116
3x70 sm	min. 12	1.4	4x0.8	2.0	31.0	3115	1963	0.268	0.443	190	148	190	148
3x95 sm	min. 15	1.6	4x0.8	2.2	36.4	4325	2478	0.193	0.32	225	175	230	179
3x120 sm	min. 18/15	1.6	4x0.8	2.2	39.0	5220	2835	0.153	0.253	260	202	270	210
3x150 sm	min. 18/15	1.8	4x0.8	2.4	43.0	6375	3336	0.124	0.206	295	229	305	237
3x185 sm	min. 30	2.0	4x0.8	2.6	47.0	7650	3995	0.0991	0.164	330	257	350	272
3x240 sm	min. 34/30	2.2	4x0.8	2.8	53.0	9650	4864	0.0754	0.125	385	299	410	318
3x300 sm	min. 34/30	2.4	4x0.8	3.0	58.5	12080	5819	0.0601	0.100	425	329	470	364

NYFGbY/ NAYFGbY
YFGY/ AYFGY

RATED VOLTAGE
Uo/U (Um): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three & Half Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

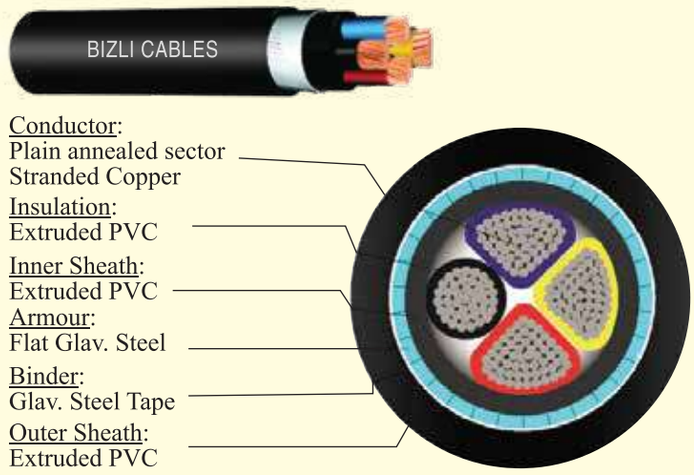
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Dimension of steel strip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	1.2	4x0.8	1.8	28.9	2010	1434	0.727	1.2	110	86	98	76
	7/1.7	1.0						1.15	1.91				
3x35+16 sm/rm	mim. 6	1.2	4x0.8	1.8	28.3	2130	1402	0.524	0.868	130	101	120	93
	7/1.7	1.0						1.15	1.91				
3x50+25 sm/rm	mim. 6	1.4	4x0.8	2.0	32.2	3060	1804	0.387	0.641	155	120	150	116
	7/2.14	1.2						0.727	1.2				
3x70+35 sm/rm	mim. 12	1.4	4x0.8	2.1	36.1	3950	2176	0.268	0.443	190	148	190	148
	mim. 6	1.2						0.524	0.868				
3x95+50 sm/rm	mim. 15	1.6	4x0.8	2.2	41.0	5110	2775	0.193	0.320	225	175	230	179
	min. 6	1.4						0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.6	4x0.8	2.3	44.4	6490	3323	0.153	0.253	260	202	270	210
	mim. 12	1.4						0.268	0.443				
3x150+70 sm/rm	mim. 18/15	1.8	4x0.8	2.4	48.3	7300	3723	0.124	0.206	295	229	305	237
	mim. 12	1.4						0.268	0.443				
3x185+95 sm/rm	mim. 30	2.0	4x0.8	2.6	53.5	9050	5019	0.0991	0.164	330	257	350	272
	mim. 15	1.6						0.193	0.320				
3x240+120 sm/rm	min. 34/30	2.2	4x0.8	2.8	59.5	11100	5812	0.0754	0.125	383	299	410	318
	min. 18/15	1.6						0.153	0.253				
3x300+150 sm/rm	min. 34/30	2.4	4x0.8	3.0	68.0	14400	7009	0.0601	0.10	425	329	470	364
	min. 18/15	1.8						0.124	0.206				

NYFGbY/ NAYFGbY
YFGY/ AYFGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Four Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

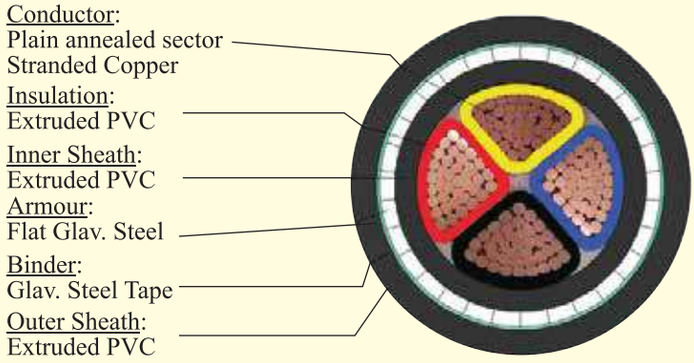
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Dimension of steel stirip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x25 rm	7/2.14	1.2	4x0.8	1.8	30.0	2100	1500	0.727	1.2	110	86	98	76
4x35 sm	min. 6	1.2	4x0.8	1.8	29.2	2400	1580	0.524	0.868	130	101	120	93
4x50 sm	min. 6	1.4	4x0.8	2.0	32.8	3280	2165	0.387	0.641	155	120	150	116
4x70 sm	min. 12	1.4	4x0.8	2.2	37.5	4285	2614	0.268	0.443	190	148	190	148
4x95 sm	min. 15	1.6	4x0.8	2.2	42.0	5500	3227	0.193	0.320	225	175	230	179
4x120 sm	min. 18/15	1.6	4x0.8	2.4	44.4	6800	3687	0.153	0.253	260	202	270	210
4x150 sm	min. 18/15	1.8	4x0.8	2.6	48.5	8180	4365	0.124	0.206	295	229	305	237
4x185 sm	mim. 30	2.0	4x0.8	2.6	54.0	10250	5134	0.0991	0.164	330	257	350	272
4x240 sm	mim. 34/30	2.2	4x0.8	3.0	60.8	12900	6292	0.0754	0.125	385	299	410	318
4x300 sm	mim. 34/30	2.4	4x0.8	3.2	67.5	15400	7394	0.0601	0.100	425	329	470	364

NYRGbY/ NAYRGbY
YRGY/ AYRGY

RATED VOLTAGE
Uo/U (Um): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

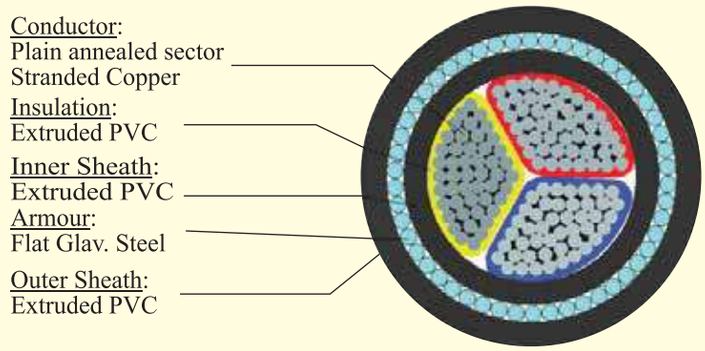
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1

Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Diameter of round steel wire armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25 rm	7/2.14	1.2	1.6	1.8	28.5	1755	1276	0.727	1.2	110	86	98	76
3x35 sm	min. 6	1.2	1.6	1.9	27.8	2080	1415	0.524	0.868	130	101	120	93
3x50 sm	min. 6	1.4	1.6	2.0	30.7	2650	1698	0.387	0.641	155	120	150	116
3x70 sm	min. 12	1.4	2.0	2.1	34.6	3700	2362	0.268	0.443	190	148	190	148
3x95 sm	min. 15	1.6	2.0	2.3	39.0	4750	2943	0.193	0.32	225	175	230	179
3x120 sm	min. 18/15	1.6	2.0	2.4	42.1	5660	3382	0.153	0.253	260	202	270	210
3x150 sm	min. 18/15	1.8	2.5	2.5	47.3	7265	4413	0.124	0.206	295	229	305	237
3x185 sm	min. 30	2.0	2.5	2.7	50.5	8660	5149	0.0991	0.164	330	257	350	272
3x240 sm	min. 34/30	2.2	2.5	2.9	57.0	10819	6245	0.0754	0.125	385	299	410	318
3x300 sm	min. 34/30	2.4	2.5	3.1	61.0	12993	7204	0.0601	0.100	425	329	470	364

NYRGbY/ NAYRGbY
YRGY/ AYRGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Three & Half Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

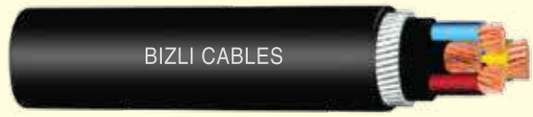
REFERENCE STANDARD

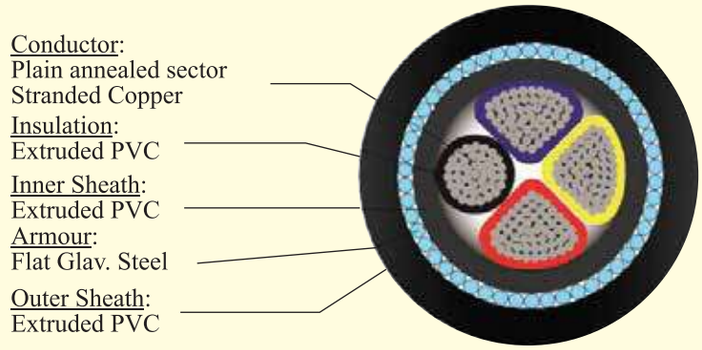
IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1





Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1
Armour: Round Galvanized Steel wire as per IEC 60502-1
Binder (optional): Galvanized Steel Tape as per IEC 60502-1
Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1
FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black
Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wires	Nominal thickness of insulation	Diameter of round steel armour wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	1.2	1.6	1.8	30.8	2010	1590	0.727	1.2	110	86	98	76
	7/1.7	1.0						1.15	1.91				
3x35+16 sm/rm	min. 6	1.2	1.6	1.9	30.1	2465	1698	0.524	0.868	130	101	120	93
	7/1.7	1.0						1.15	1.91				
3x50+25 sm/rm	min. 6	1.4	2.0	2.0	33.5	3250	2140	0.387	0.641	155	120	150	116
	7/2.14	1.2						0.727	1.2				
3x70+35 sm/rm	min. 12	1.4	2.0	2.2	38.7	4310	2752	0.268	0.443	190	148	190	148
	min. 6	1.2						0.524	0.868				
3x95+50 sm/rm	min. 15	1.6	2.0	2.3	43.3	5601	3480	0.193	0.320	225	175	230	179
	min. 6	1.4						0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.6	2.5	2.5	48.0	7159	4435	0.153	0.253	260	202	270	210
	min. 12	1.4						0.268	0.443				
3x150+70 sm/rm	min. 18/15	1.8	2.5	2.6	51.2	8347	5049	0.124	0.206	295	229	305	237
	min. 12	1.4						0.268	0.443				
3x185+95 sm/rm	min. 30	2.0	2.5	2.8	56.1	10000	5888	0.0991	0.164	330	257	350	272
	min. 15	1.6						0.193	0.32				
3x240+120 sm/rm	min. 34/30	2.2	2.5	3.0	62.3	12383	7049	0.0754	0.125	385	299	410	318
	min. 18/15	1.6						0.153	0.253				
3x300+150 sm/rm	min. 34/30	2.4	2.5	3.1	68.2	15100	8380	0.0601	0.10	425	329	470	364
	min. 18/15	1.8						0.124	0.206				

NYRGbY/ NAYRGbY
YRGY/ AYRGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

PVC Insulated & PVC Sheathed Four Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

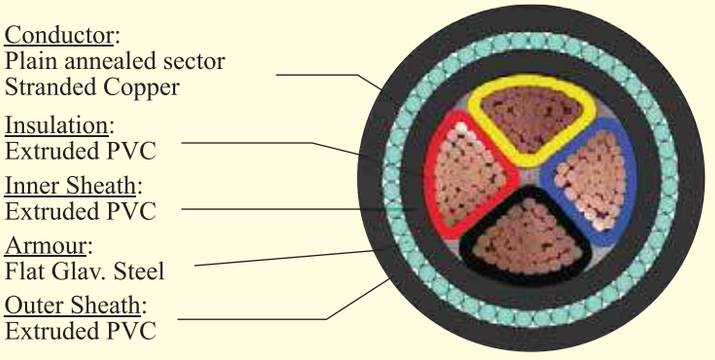
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69 & DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1

Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Diameter of round steel armour wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x25 rm	7/2.14	1.2	1.6	1.8	30.0	2135	1497	0.727	1.2	110	86	98	76
4x35 sm	min. 6	1.2	1.6	1.9	30.1	2620	1733	0.524	0.868	130	101	120	93
4x50 sm	min. 6	1.4	2.0	2.1	34.5	3525	2257	0.387	0.641	155	120	150	116
4x70 sm	min. 12	1.4	2.0	2.3	39.5	4675	2892	0.268	0.443	190	148	190	148
4x95 sm	min. 15	1.6	2.5	2.4	45.2	6450	4044	0.193	0.320	225	175	230	179
4x120 sm	min. 18/15	1.6	2.5	2.5	48.6	7640	4601	0.153	0.253	260	202	270	210
4x150 sm	min. 18/15	1.8	2.5	2.7	52.0	9150	5348	0.124	0.206	295	229	305	237
4x185 sm	min. 30	2.0	2.5	2.8	58.3	11050	6369	0.0991	0.164	330	257	350	272
4x240 sm	min. 34/30	2.2	2.5	3.1	63.0	13850	7751	0.0754	0.125	385	299	410	318
4x300 sm	min. 34/30	2.4	2.5	3.3	70.1	17300	9581	0.0601	0.10	425	329	470	364

NYY-1/ YY-1

PVC Insulated & PVC Sheathed Multi Core Control Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0 (1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

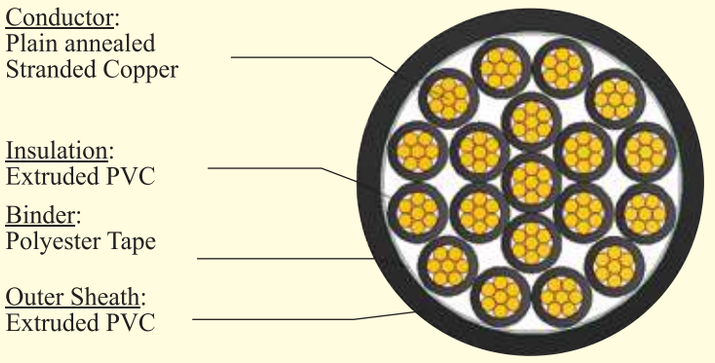
IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular Copper, Class-1 & 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Binder : Polyester tape



Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation:

X= Black with continuous number print

G= Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. & diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 30°C in ground	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps	amps
5x1.5 re	1/1.38	0.8	1.8	12.6	210	12.1	18	13
7x1.5 re	1/1.38	0.8	1.8	13.5	260	12.1	16	12
10x1.5 re	1/1.38	0.8	1.8	16.5	360	12.1	13	10
12x1.5 re	1/1.38	0.8	1.8	17.0	405	12.1	12	9
16x1.5 re	1/1.38	0.8	1.8	18.6	510	12.1	11	8
21x1.5 re	1/1.38	0.8	1.8	20.5	640	12.1	9	7
24x1.5 re	1/1.38	0.8	1.8	22.5	720	12.1	9	7
30x1.5 re	1/1.38	0.8	1.8	24.0	860	12.1	8	6
5x2.5 re	1/1.78	0.8	1.8	13.6	289	7.41	24	19
7x2.5 re	1/1.78	0.8	1.8	14.5	360	7.41	21	17
10x2.5 re	1/1.78	0.8	1.8	18.3	490	7.41	18	14
12x2.5 re	1/1.78	0.8	1.8	18.8	567	7.41	16	13
16x2.5 re	1/1.78	0.8	1.8	20.8	727	7.41	14	11
21x2.5 re	1/1.78	0.8	1.8	23.2	920	7.41	13	10
24x2.5 re	1/1.78	0.8	1.8	25.5	1040	7.41	12	9
30x2.5 re	1/1.78	0.8	1.8	26.9	1250	7.41	10	8
5x4 rm	7/0.85	1.0	1.8	16.8	402	4.61	31	25
7x4 rm	7/0.85	1.0	1.8	18.2	544	4.61	27	22
10x4 rm	7/0.85	1.0	1.8	22.8	750	4.61	23	19
12x4 rm	7/0.85	1.0	1.8	23.7	855	4.61	21	17

NYY-1 (Flexible)/ YY-1 (Flexible)

PVC Insulated & PVC Sheathed Multi Core Flexible Control Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

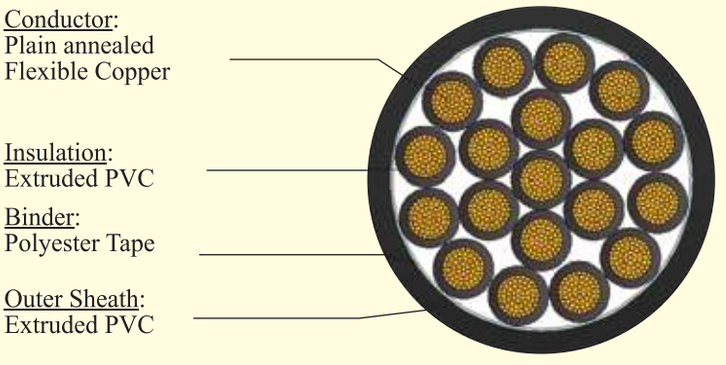
REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1



Binder : Polyester tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation:

X = Black with continuous number print

G = Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. & diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20 °C	Current rating Capacity in Ground at 30°C	Current rating Capacity in Air at 35°C
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps	amps
5 x 1.5 rm	30/0.25	0.8	1.8	12.8	220	13.3	20	15
7 x 1.5 rm	30/0.25	0.8	1.8	13.7	270	13.3	18	14
10 x 1.5 rm	30/0.25	0.8	1.8	16.7	375	13.3	15	12
12 x 1.5 rm	30/0.25	0.8	1.8	17.2	420	13.3	14	11
16 x 1.5 rm	30./0.25	0.8	1.8	19.0	530	13.3	13	10
21 x 1.5 rm	30/0.25	0.8	1.8	20.8	660	13.3	11	9
24 x 1.5 rm	30/0.25	0.8	1.8	23.0	760	13.3	10	9
30 x 1.5 rm	30/0.25	0.8	1.8	24.2	900	13.3	9	8
5 x 2.5 rm	50/0.25	0.8	1.8	13.8	295	7.98	26	21
7 x 2.5 rm	50/0.25	0.8	1.8	15.0	370	7.98	23	19
10 x 2.5 rm	50/0.25	0.8	1.8	18.8	505	7.98	20	16
12 x 2.5 rm	50/0.25	0.8	1.8	19.4	580	7.98	18	15
16 x 2.5 rm	50/0.25	0.8	1.8	21.4	740	7.98	16	13
21 x 2.5 rm	50/0.25	0.8	1.8	23.7	940	798	15	12
24 x 2.5 rm	50/0.25	0.8	1.8	26.2	1080	7.98	14	11
30 x 2.5 rm	50/0.25	0.8	1.8	27.8	1290	7.98	12	10
5 x 4 rm	56/0.30	1.0	1.8	16.9	420	4.95	33	27
7 x 4 rm	56/0.30	1.0	1.8	18.3	550	4.95	29	24
10 x 4 rm	56/0.30	1.0	1.8	23.1	770	4.95	25	21
12 x 4 rm	56/0.30	1.0	1.8	23.9	890	4.95	23	19

NYRGbY-1/ YRGY-1

PVC Insulated & PVC Sheathed Multi Core Armoured Control Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

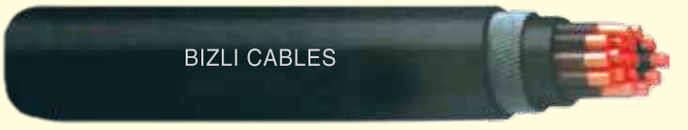
Conductor: Plain annealed Solid/ Stranded circular Copper, Class-1 & 2 as per IEC 60228

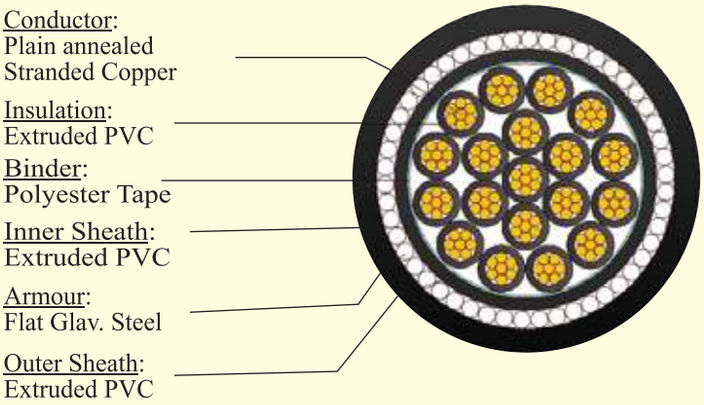
Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Binder : Polyester tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1





Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation:

X = Black with continuous number print

G = Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. & diameter of wire	Nominal thickness of insulation	Nominal diameter of round steel wire armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20 °C	Current rating Capacity in Ground at 30°C	Current rating Capacity in Air at 35°C
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
5 x 1.5 re	1/1.38	0.8	1.25	1.8	16.7	550	12.1	18	13
7 x 1.5 re	1/1.38	0.8	1.25	1.8	17.5	620	12.1	16	12
10 x 1.5 re	1/1.38	0.8	1.25	1.8	20.7	810	12.1	13	10
12 x 1.5 re	1/1.38	0.8	1.25	1.8	21.2	885	12.1	12	9
19 x 1.5 re	1/1.38	0.8	1.6	1.8	24.5	1280	12.1	10	7
24 x 1.5 re	1/1.38	0.8	1.6	1.8	27.6	1520	12.1	9	6
37 x 1.5 re	1/1.38	0.8	1.6	1.9	31.0	1960	12.1	8	5
5 x 2.5 re	1/1.78	0.8	1.25	1.8	17.8	650	7.41	24	19
7 x 2.5 re	1/1.78	0.8	1.25	1.8	18.8	750	7.41	21	17
10 x 2.5 re	1/1.78	0.8	1.25	1.8	22.3	980	7.41	18	14
12 x 2.5 re	1/1.78	0.8	1.6	1.8	23.5	1200	7.41	16	13
19 x 2.5 re	1/1.78	0.8	1.6	1.8	26.5	1560	7.41	14	12
24 x 2.5 re	1/1.78	0.8	1.6	1.9	30.2	1900	7.41	13	11
37 x 2.5 re	1/1.78	0.8	1.6	2.0	34.0	2480	7.41	9	7

NYCY/ YCY

PVC Insulated & PVC Sheathed Three Core Concentric Wire Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use indoors, in cable ducts, outdoors and in ground for power plants, industrial plants, as well as in local power networks, if increased mechanical & electrical protection is required. The concentric conductor (C) is allowed to use as Protective Earth (PE), Neutral Conductor or as Screen.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

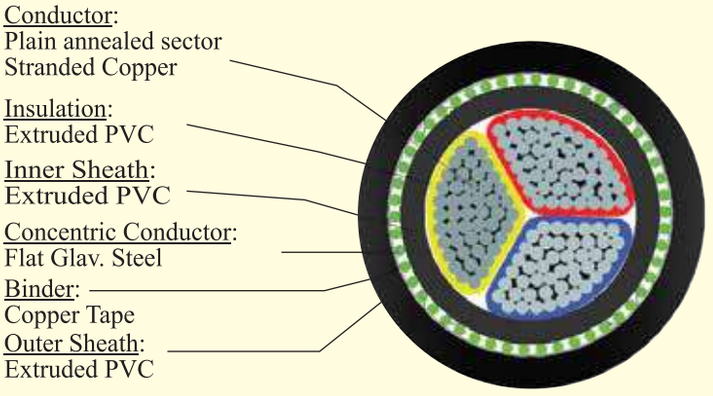
IEC 60502-1, VDE 0271/ 3.69, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper, Class- 2 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) PVC/A temperature rating 70ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1



Concentric Conductor: Plain Annealed Copper wire concentrically applied over inner sheath

Binder: Helically applied Copper Tape.

Outer Sheath: Poly vinyl Chloride (PVC) ST-1 temperature rating 80ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire	No. & dia. of concentric conductor	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20 °C	Current rating at 30°C in Ground	Current rating at 35°C in air
core x mm^2	nos./mm	no./mm	mm	mm	mm	kg/km	Ω/km	amps	amps
3x25 rm+16c	7/2.14	32/0.8	1.2	1.8	24.3	1302	0.727	110	98
3x35 sm+16c	min. 6	32/0.8	1.2	1.8	26.2	1623	0.524	130	120
3x50 sm+25c	min. 6	29/1.05	1.4	1.9	30.4	2266	0.387	155	150
3x70 sm+35c	min. 12	41/1.05	1.4	2.1	33.7	3011	0.268	190	190
3x95 sm+50c	min. 15	59/1.05	1.6	2.2	38.4	4005	0.193	225	230
3x120 sm+70c	min. 18	70/1.13	1.6	2.4	42.1	5031	0.153	260	270
3x150 sm+70c	min. 18	70/1.13	1.8	2.5	45.3	6013	0.124	295	305
3x185 sm+95c	min. 30	67/1.35	2.0	2.7	50.1	7458	0.0991	330	350
3x240 sm+120c	min. 34	65/1.53	2.2	2.9	55.8	9497	0.0754	385	410
3x300 sm+150c	min. 34	72/1.63	2.4	3.2	61.3	11730	0.0601	425	470

SERVICE DROP CABLE

RATED VOLTAGE
U_o/U: 600/1000 V

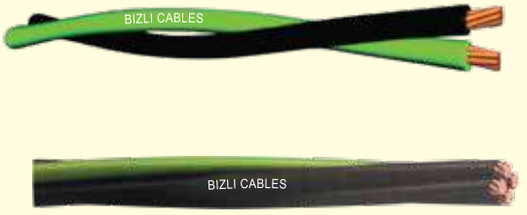
Application

Suitable for outdoors as a sevice drop cable.

Construction

Phase: Plain Annealed Stranded Copper /Aluminium Conductor, Black PVC Insulated.

Messenger: Hard drawn stranded copper / Aluminium Conductor, Green PVC Insulated.



DUPLEX

PHYSICAL DATA						ELECTRICAL DATA			
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire	Nominal thickness of insulation	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in air	
				Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	kg/km	kg/km	Ω /km	Ω/km	amps	amps
2.5 re/2.5 re	1.78/1.78	1.6	10.0	95	70	7.41	12.1	27	21
2.5rm/2.5rm	7x.67/7x0.67	1.6	10.6	100	71	7.41	12.1	27	21
4 rm/4 re	7x0.85/2.26	1.6	11.5	135	90	4.61	7.41	35	29
4rm/4rm	7x.85/7x0.85	1.6	11.8	140	91	4.61	7.41	35	29
6 rm/6 re	7x1.05/2.77	1.6	12.6	178	104	3.08	4.61	45	37
6 rm/6 rm	7x1.05/7x1.05	1.6	12.9	180	105	3.08	4.61	45	37
10rm/10rm	7x1.35/7x1.35	1.6	14.6	262	136	1.83	3.08	62	47
16 rm/16 rm	7x1.71/7x1.71	1.6	16.7	382	180	1.15	1.91	84	65
25 rm/25 rm	7x2.14/7x2.14	1.6	19.3	563	244	0.727	1.2	110	85

QUADUPLEX CABLES

PHYSICAL DATA						ELECTRICAL DATA			
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire	Nominal thickness of insulation	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 35°C in air	
				Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	kg/km	kg/km	Ω /km	Ω/km	amps	amps
3x4 rm/4 re	7x0.85/2.26	1.6	14.0	264	170	4.61	7.41	32	27
3x4rm/4rm	7x.85/7x.85	1.6	14.5	275	180	4.61	7.41	32	27
3x6 rm/6 re	7x1.05/2.77	1.6	15.4	352	200	3.08	4.61	41	34
3x6 rm/6 rm	7x1.05/7x1.05	1.6	15.6	356	205	3.08	4.61	41	34
3x10 rm/10 rm	7x1.35/7x1.35	1.6	17.6	524	270	1.83	3.08	56	43
3x16 rm/16rm	7x1.71/7x1.71	1.6	20.4	780	360	1.15	1.91	75	58
3x25 rm/25 rm	7x2.14/7x2.14	1.6	24.0	1150	488	0.727	1.2	98	76

Welding Cable

RATED VOLTAGE: 200V

PVC Insulated Single Core Flexible Cable

APPLICATION

Especially for use with hand-held welding electrodes, for connection to the secondary side of welding transformers. Also suitable for low voltage power supply.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
High Flexible Conductor consists of a large number of thin wires
Flame Retardant as per IEC 60332

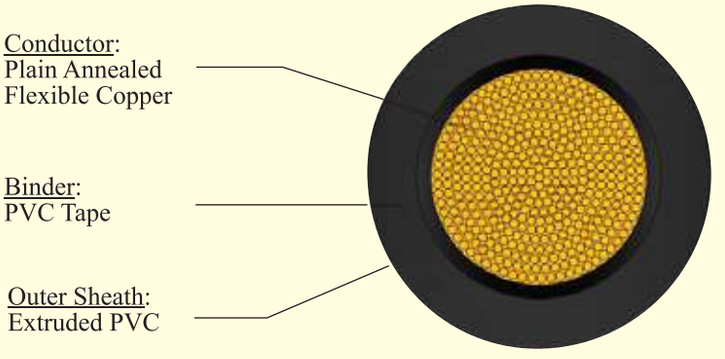
REFERENCE STANDARD

BS 6500, BDS 899, IEC 60332, IEC 61034

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-6 as per IEC 60228

Binder: PVC or Non-woven Tape.



Insulation: Poly vinyl Chloride (PVC), PVC/A temperature rating 70ºC as per IEC 60502-1
FR & FRLS Insulation available on request.

COLOR

Insulation: Black

PHYSICAL & ELECTRICAL DATA						
Nominal cross section area of conductor	No. of strand & diameter of wire	Nominal Thickness of Insulation	Approximate overall diameter	Approximate weight	Maximum D.C resistance of conductor at 20°C	Current rating at maximum duty cycle of 60%
mm²	nos./mm	mm	mm	kg/km	ohm/km	ampere
1 x 25 rm	783/0.2	2.0	12.3	325	0.780	169
1 x 35 rm	1107/0.2	2.0	13.4	430	0.554	215
1 x 50 rm	702/0.3	2.0	15.3	575	0.386	264
1 x 70 rm	990/0.3	2.2	18.0	800	0.272	330
1 x 95 rm	1332/0.3	2.2	19.5	1000	0.206	405
1 x 120rm	1697/0.3	2.2	22.0	1300	0.161	473
1 x 150rm	2122/0.3	2.2	23.5	1600	0.129	545

Submersible Cable

RATED VOLTAGE: up to 1100 V

PVC Insulated PVC sheathed 3 core Flat Flexible Cable.

APPLICATION

For usage in submersible pumps in deep wells for irrigation, drinking water supply, industries, mines, fountains to provide electrical power in water condition.

FEATURES

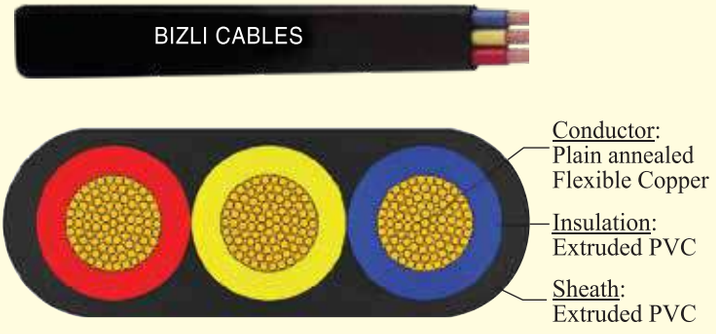
Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
High Flexible Conductor consists of a large number of thin wires
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
AC Test voltage 3.5 KV
Excellent Mechanical & Electrical properties

REFERENCE STANDARD

IS 694, BS 6500, IEC 60227

CONSTRUCTION

Conductor: Plain annealed Flexible Circular Copper, Class-5 as per IEC 60228



Insulation: Poly vinyl Chloride (PVC), PVC/A temperature rating 70ºC as per IEC 60502-1

Sheath: Poly vinyl Chloride (PVC), ST-1 temperature rating 70ºC as per IEC 60502-1

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA	
Nominal cross section area of conductor	No.of strands & diameter of wire	Nominal Thickness of Insulation	Nominal Thickness of sheath	Approx. dimension of cable	Approx. weight of cable	Maximum D.C resistance of conductor at 20°C	Current Carrying Capacity at 35°C temp.
core x mm²	nos./mm	mm	mm	mm	kg/km	ohm/km	Amp
3 x 1.0 rm	32/0.20	0.6	0.8	9.85x 4.5	81	19.5	12
3 x 1.5 rm	30/0.25	0.6	0.9	10.9 x 4.9	104	13.3	15
3 x 2.5 rm	50/0.25	0.7	1.0	13.2 x 5.9	155	7.98	20
3 x 4.0 rm	56/0.30	0.8	1.1	15.5 x 6.7	225	4.95	25
3 x 6.0 rm	84/0.30	0.8	1.1	17.5 x 7.4	305	3.30	32
3 x 10 rm	80/0.40	1.0	1.2	21.5 x 9.0	480	1.91	45
3 x 16 rm	126/0.40	1.0	1.3	25.4 x 10.4	700	1.21	57
3 x 25 rm	196/0.40	1.2	1.5	31.2 x 12.5	1065	0.780	72
3 x 35 rm	276/0.40	1.2	1.6	34.8 x 14.0	1410	0.554	90
3 x 50 rm	396/0.40	1.4	1.7	41.0 x 16.2	1980	0.386	115
3 x 70 rm	360/0.50	1.6	1.9	48.0 x 19.0	2750	0.272	143
3 x 95 rm	475/0.50	1.8	2.0	55.0 x21.5	3650	0.206	165

XLPE INSULATED LT CABLE

2xY/ A2xY
N2xY/ NA2xY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Single Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

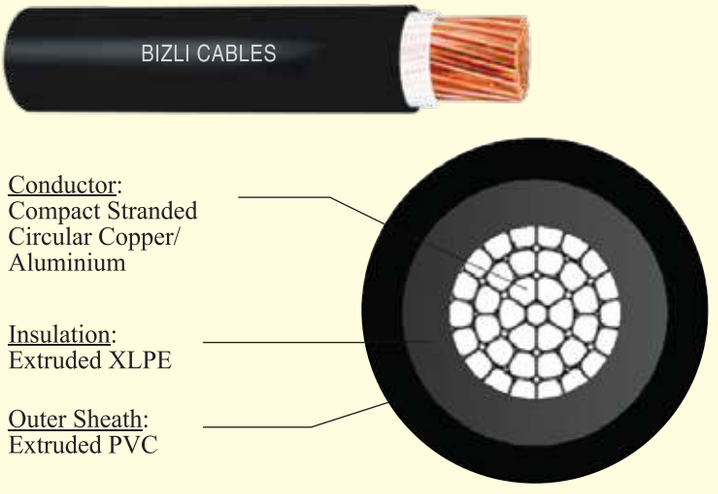
Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276/ 603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded/ Compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1

Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1 x 1.5 re	1/1.38	0.7	1.4	6.1	50		12.1		36		30	
1 x 1.5 rm	7/0.52	0.7	1.4	6.2	52		12.1		36		30	
1 x 2.5 re	1/1.78	0.7	1.4	6.5	63		7.41		47		39	
1 x 2.5 rm	7/0.67	0.7	1.4	6.6	65		7.41		47		39	
1 x 4 rm	7/0.85	0.7	1.4	7.3	95	55	4.61	7.41	59	47	50	39
1 x 6 rm	7/1.04	0.7	1.4	7.9	107	66	3.08	4.61	78	64	69	56
1 x 10 rm	7/1.35	0.7	1.4	8.8	155	85	1.83	3.08	100	77	94	72
1 x 16 rm	7/1.70	0.7	1.4	9.9	227	112	1.15	1.91	130	101	125	97
1 x 25 rm	7/2.14	0.9	1.4	11.0	324	160	0.727	1.2	155	120	160	125
1 x 35 rm	min. 6	0.9	1.4	12.1	425	200	0.524	0.868	185	144	195	150
1 x 50 rm	min. 6	1.0	1.4	13.6	584	258	0.387	0.641	225	175	245	190
1 x 70 rm	min. 12	1.1	1.4	15.4	788	335	0.268	0.443	270	210	300	233
1 x 95 rm	min. 15	1.1	1.5	17.1	1041	430	0.193	0.320	310	240	350	272
1 x 120 rm	min. 18/15	1.2	1.5	18.8	1292	531	0.153	0.253	350	272	405	315
1 x 150 rm	min. 18/15	1.4	1.6	21.0	1611	640	0.124	0.206	390	302	460	357
1 x 185 rm	min. 30	1.6	1.6	23.0	1976	775	0.0991	0.164	450	350	555	430
1 x 240 rm	min. 34/30	1.7	1.7	25.6	2528	985	0.0754	0.125	515	400	640	498
1 x 300 rm	min. 34/30	1.8	1.8	28.3	3136	1210	0.0601	0.10	585	463	770	537
1 x 400 rm	min. 53	2.0	1.9	32.0	4130	1525	0.047	0.0778	680	509	900	626
1 x 500 rm	min. 53	2.2	2.0	35.4	5134	1890	0.0366	0.0605	800	592	1030	731
1 x 630 rm	min. 53	2.4	2.2	39.5	6415	2420	0.0283	0.0469	945	696	1160	837
1 x 800 rm	min. 53	2.6	2.3	45.0	8116	3000	0.0221	0.0367	1095	821	1310	942
1 x 1000 rm	min. 53	2.8	2.4	50.0	10096	3650	0.0176	0.0291	1270	952	1480	1064

2xY/ A2xY
N2xY/ NA2xY

XLPE Insulated & PVC Sheathed Two Core Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

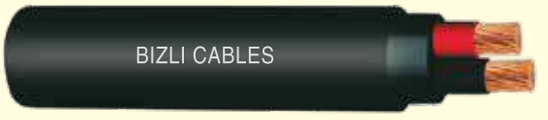
REFERENCE STANDARD

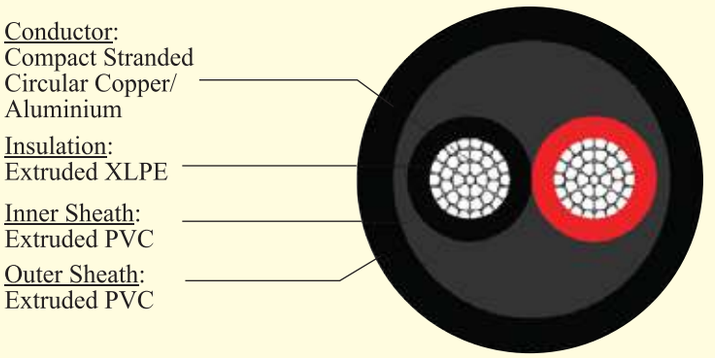
IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded/ Compacted circular Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1





Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red & Black

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
2 x 1.5 re	1/1.38	0.7	1.8	11.2	155	-	12.1	18.1	34	-	27	-
2 x 1.5 rm	7/0.52	0.7	1.8	11.6	162	-	12.1	18.1	34	-	27	-
2 x 2.5 re	1/1.78	0.7	1.8	12.0	185	-	7.41	12.1	44	-	35	-
2 x 2.5 rm	7/0.67	0.7	1.8	12.5	195	-	7.41	12.1	44	-	35	-
2 x 4 rm	7/0.85	0.7	1.8	13.6	276	187	4.61	7.41	55	34	45	31
2 x 6 rm	7/1.04	0.7	1.8	14.8	349	218	3.08	4.61	74	40	62	40
2 x 10 rm	7/1.35	0.7	1.8	16.6	478	271	1.83	3.08	97	55	84	53
2 x 16 rm	7/1.70	0.7	1.8	18.1	654	341	1.15	1.91	125	73	110	70
2 x 25 rm	7/2.14	0.9	1.8	21.5	996	457	0.727	1.2	150	94	140	96
2 x 35 rm	min.6	0.9	1.8	23.7	1274	576	0.524	0.868	180	114	190	117

2xY/ A2xY
N2xY/ NA2xY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

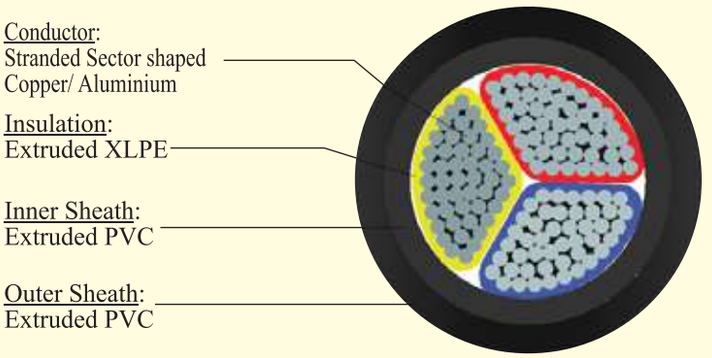
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x1.5 re	1/1.38	0.7	1.8	11.8	182		12.1	18.1	30		23	
3x1.5 rm	7/0.52	0.7	1.8	12.2	190		12.1	18.1	30		23	
3x2.5 re	1/1.78	0.7	1.8	12.7	235		7.41	12.1	38		32	
3x2.5 rm	7/0.67	0.7	1.8	13.2	246		7.41	12.1	38		32	
3x4 rm	7/0.85	0.7	1.8	14.5	321	213	4.61	7.41	48	34	41	31
3x6 rm	7/1.04	0.7	1.8	15.6	421	252	3.08	4.61	64	40	56	40
3x10 rm	7/1.35	0.7	1.8	17.5	568	320	1.83	3.08	83	55	75	53
3x16 rm	7/1.70	0.7	1.8	19.6	805	410	1.15	1.91	110	73	98	70
3x25 rm	7/2.14	0.9	1.8	23.0	1100	500	0.727	1.2	130	94	120	96
3x35 sm	min. 6	0.9	1.8	22.3	1237	576	0.524	0.868	155	114	150	117
3x50 sm	min. 6	1.0	1.8	25.1	1694	778	0.387	0.641	190	133	190	142
3x70 sm	min. 12	1.1	1.9	28.4	2315	983	0.268	0.443	225	164	230	179
3x95 sm	min. 15	1.1	2.0	32.2	3161	1253	0.193	0.320	260	196	270	221
3x120 sm	min. 18/15	1.2	2.1	35.3	3915	1570	0.153	0.253	295	223	305	257
3x150 sm	min. 18/15	1.4	2.3	38.7	4866	2000	0.124	0.206	330	249	350	292
3x185 sm	min. 30	1.6	2.4	42.5	5978	2470	0.0991	0.164	385	282	410	337
3x240 sm	min. 34/30	1.7	2.6	47.6	7534	3165	0.0754	0.125	425	327	470	400
3x300 sm	min. 34/30	1.8	2.8	53.1	9541	3840	0.0601	0.10	478	368	564	455

2xY/ A2xY
N2xY/ NA2xY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three & Half Core Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

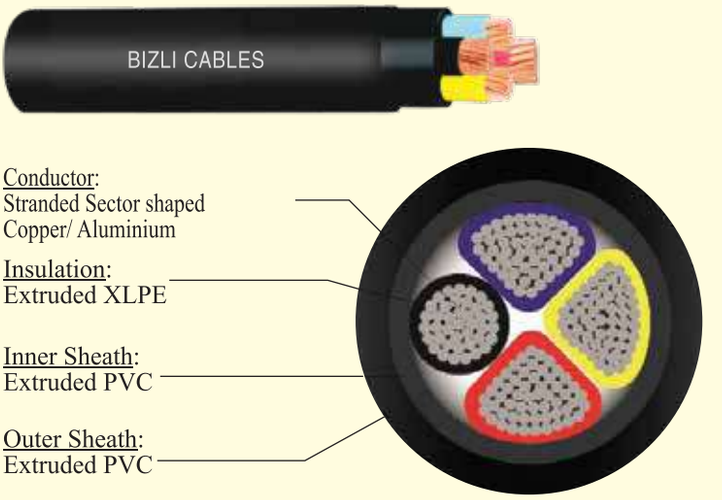
Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228



Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	0.9	1.8	21.7	1110	637	0.727	1.2	130	94	120	96
	7/1.7	0.7					1.15	1.91				
3x35+16 sm/rm	min. 6	0.9	1.8	24.0	1412	702	0.524	0.868	155	114	150	117
	7/1.7	0.7					1.15	1.91				
3x50+25 sm/rm	min. 6	1.0	1.8	27.0	2035	946	0.387	0.641	190	133	190	142
	7/2.14	0.9					0.727	1.2				
3x70+35 sm/rm	min. 12	1.1	1.9	30.5	2753	1201	0.268	0.443	225	164	230	179
	min. 6	0.9					0.524	0.868				
3x95+50 sm/rm	min. 15	1.1	2.1	34.9	3721	1553	0.193	0.32	260	196	270	221
	min. 6	1.0					0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.2	2.2	38.2	4912	1898	0.153	0.253	295	223	305	257
	min. 12	1.1					0.268	0.443				
3x150+70 sm/rm	min. 18/15	1.4	2.3	42.1	5673	2334	0.124	0.206	330	249	350	292
	min. 12	1.1					0.268	0.443				
3x185+95 sm/rm	min. 30	1.6	2.5	47.3	7105	2831	0.0991	0.164	385	282	410	337
	min. 15	1.1					0.193	0.32				
3x240+120 sm/rm	min. 34/30	1.7	2.7	53.8	9219	3601	0.0754	0.125	425	327	470	400
	min. 18/15	1.2					0.153	0.253				
3x300+150 sm/rm	min. 34/30	1.8	2.9	58.6	11563	4387	0.0601	0.10	478	368	564	455
	min. 18/15	1.4					0.124	0.206				

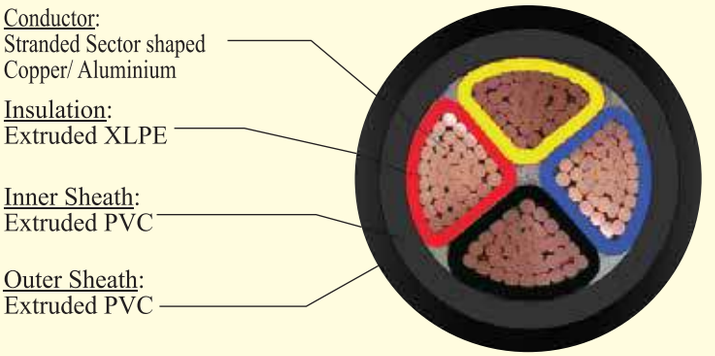
2xY/ A2xY
N2xY/ NA2xY

XLPE Insulated & PVC Sheathed Four Core Cable

RATED VOLTAGE
U_o/U (U_m):0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.



FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular/ Sector shaped Copper/ Aluminum, Class-1 & 2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x1.5 re	1/1.38	0.7	1.8	12.1	212		12.1	18.1	30	-	23	-
4x1.5 rm	7/0.52	0.7	1.8	12.4	220		12.1	18.1	30	-	23	-
4x2.5 re	1/1.78	0.7	1.8	13.6	280		7.41	12.1	38	-	32	-
4x2.5 rm	7/0.67	0.7	1.8	14.1	288		7.41	12.1	38	-	32	-
4x4 rm	7/0.85	0.7	1.8	15.4	385	246	4.61	7.41	48	34	41	31
4x6 rm	7/1.04	0.7	1.8	16.8	488	295	3.08	4.61	64	40	56	40
4x10 rm	7/1.35	0.7	1.8	19.2	690	378	1.83	3.08	83	55	75	53
4x16 rm	7/1.70	0.7	1.8	21.5	1060	493	1.15	1.91	110	73	98	70
4x25 rm	7/2.14	0.9	1.8	23.4	1388	516	0.727	1.2	130	94	120	96
4x35 sm	min. 6	0.9	1.8	24.5	1624	735	0.524	0.868	155	114	150	117
4x50 sm	min. 6	1.0	1.9	27.3	2224	970	0.387	0.641	190	133	190	142
4x70 sm	min. 12	1.1	2.0	30.7	3078	1250	0.268	0.443	225	164	230	179
4x95 sm	min. 15	1.1	2.1	35.8	4068	1641	0.193	0.320	260	196	270	221
4x120 sm	min. 18/15	1.2	2.3	38.4	5090	1992	0.153	0.253	295	223	305	257
4x150 sm	min. 18/15	1.4	2.4	42.3	6308	2488	0.124	0.206	330	249	350	292
4x185 sm	min. 30	1.6	2.6	48.0	7974	3042	0.0991	0.164	385	282	410	337
4x240 sm	min. 34/30	1.7	2.8	53.6	10212	3917	0.0754	0.125	425	327	470	400
4x300 sm	min. 34/30	1.8	3.0	59.6	12588	4705	0.0601	0.10	578	368	564	455

2xRaY/ A2xRaY
N2xRaY/ NA2xRaY

RATED VOLTAGE
U_o/U (U_m):0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Single Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

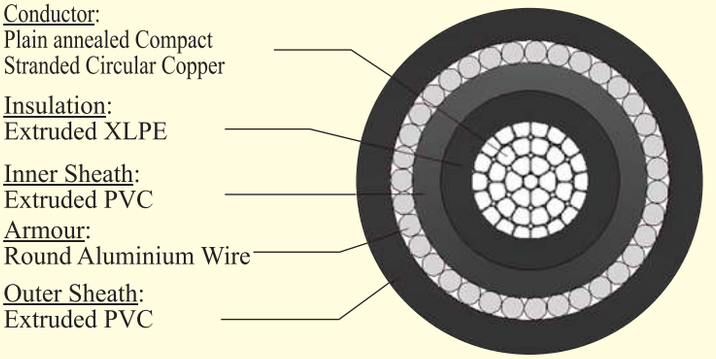
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded/ Compacted circular Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Round Aluminium wire as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Diameter of round Aluminum armour wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
1x35 rm	min. 6	0.9	1.4	1.8	17.3	587	370	0.524	0.868	185	144	195	150
1x50 rm	min. 6	1.0	1.4	1.8	19.3	730	456	0.387	0.641	225	175	245	190
1x70 rm	min. 12	1.1	1.4	1.8	20.8	957	550	0.268	0.443	270	210	300	233
1x95 rm	min. 15	1.1	1.4	1.8	23.3	1202	655	0.193	0.320	310	240	350	272
1x120 rm	min. 18/15	1.2	1.6	1.8	25.5	1510	790	0.153	0.253	350	272	405	315
1x150 rm	min. 18/15	1.4	1.6	1.8	27.5	1837	930	0.124	0.206	390	302	460	357
1x185 rm	min. 30	1.6	1.6	1.8	29.5	2231	1085	0.0991	0.164	450	350	555	430
1x240 rm	min. 34/30	1.7	1.6	1.9	32.3	2798	1335	0.0754	0.125	515	400	640	498
1x300 rm	min. 34/30	1.8	1.6	1.9	36.0	3467	1625	0.0601	0.10	585	463	770	537
1x400 rm	min. 53	2.0	2.0	2.1	40.1	4491	2080	0.047	0.0778	680	509	900	686
1x500 rm	min.53	2.2	2.0	2.2	43.6	5509	2505	0.0366	0.0605	800	592	1030	785
1x630 rm	min. 53	2.4	2.0	2.3	47.2	6809	3100	0.0283	0.0469	945	696	1160	855
1x800 rm	min. 53	2.6	2.5	2.5	54.0	8695	3875	0.0221	0.0367	1095	821	1310	925
1x1000 rm	min. 53	2.8	2.5	2.7	58.9	10754	4735	0.0176	0.0291	1270	952	1480	1092

2xFGY/ A2xFGY
N2xFGY/ NA2xFGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

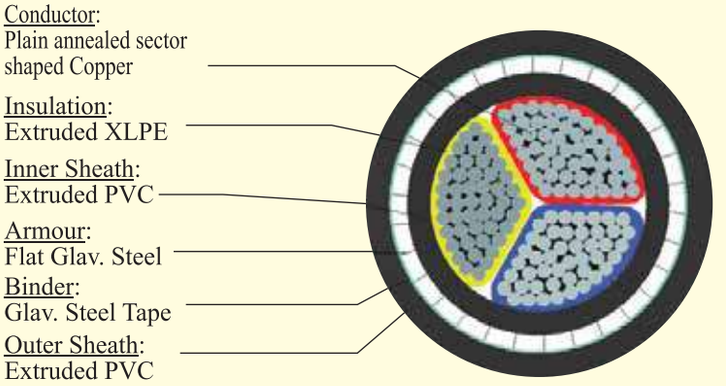
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Dimension of steel strip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25 rm	7/2.14	0.9	4x0.8	1.8	24.8	1487	1071	0.727	1.20	130	94	120	96
3x35 sm	min. 6	0.9	4x0.8	1.8	25.4	1757	1117	0.524	0.868	155	114	150	117
3x50 sm	min. 6	1.0	4x0.8	1.9	27.2	2329	1394	0.387	0.641	190	133	190	142
3x70 sm	min. 12	1.1	4x0.8	2.0	30.4	2986	1690	0.268	0.443	225	164	230	179
3x95 sm	min. 15	1.1	4x0.8	2.1	35.2	4136	2053	0.193	0.320	260	196	270	221
3x120 sm	min. 18/15	1.2	4x0.8	2.2	38.0	5025	2410	0.153	0.253	295	223	305	257
3x150 sm	min. 18/15	1.4	4x0.8	2.4	42.2	6141	2862	0.124	0.206	330	249	350	292
3x185 sm	min. 30	1.6	4x0.8	2.5	46.0	7368	3398	0.0991	0.164	385	282	410	337
3x240 sm	min. 34/30	1.7	4x0.8	2.7	51.8	9584	4147	0.0754	0.125	425	327	490	400
3x300 sm	min. 34/30	1.8	4x0.8	2.9	56.5	11621	4900	0.0601	0.10	578	368	664	455

2xFGY/ A2xFGY
N2xFGY/ NA2xFGY

RATED VOLTAGE
U_o/U (U_m):0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three & Half Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

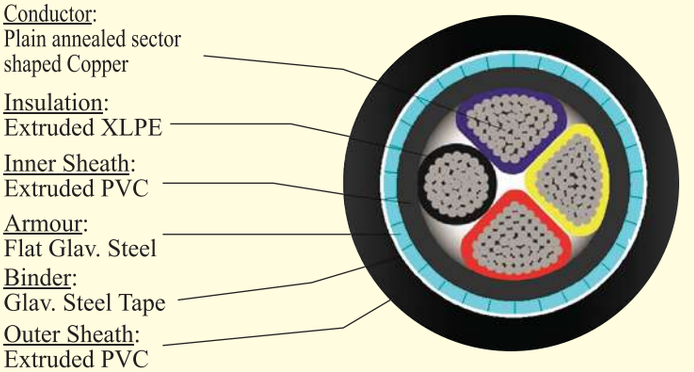
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Dimension of steel strip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	0.9	4x0.8	1.8	25.9	1744	1170	0.727	1.2	130	94	120	96
	7/1.7	0.7						1.15	1.91				
3x35+16 sm/rm	min. 6	0.9	4x0.8	1.8	27.7	2028	1236	0.524	0.868	155	114	150	117
	7/1.7	0.7						1.15	1.91				
3x50+25 sm/rm	min. 6	1.0	4x0.8	1.9	31.2	2915	1507	0.387	0.641	190	133	190	142
	7/2.14	0.9						0.727	1.2				
3x70+35 sm/rm	min. 12	1.1	4x0.8	2.0	35.3	3793	1823	0.268	0.443	225	164	230	179
	min. 6	0.9						0.524	0.868				
3x95+50 sm/rm	min. 15	1.1	4x0.8	2.2	40.0	4881	2262	0.193	0.320	260	196	270	221
	min. 6	1.0						0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.2	4x0.8	2.3	43.4	6252	2698	0.153	0.253	295	223	305	257
	min. 12	1.1						0.268	0.443				
3x150+70 sm/rm	min. 18/15	1.4	4x0.8	2.4	47.3	7023	3205	0.124	0.206	330	249	350	292
	min. 12	1.1						0.268	0.443				
3x185+95 sm/rm	min. 30	1.6	4x0.8	2.6	52.7	8975	3808	0.0991	0.164	385	282	410	337
	min. 15	1.1						0.193	0.32				
3x240+120 sm/rm	min. 34/30	1.7	4x0.8	2.8	58.5	10669	4500	0.0754	0.125	425	327	490	400
	min. 18/15	1.2						0.153	0.253				
3x300+150 sm/rm	min. 34/30	1.8	4x0.8	2.9	66.6	13863	5435	0.0601	0.10	578	368	664	455
	min. 18/15	1.4						0.124	0.206				

2xFGY/ A2xFGY
N2xFGY/ NA2xFGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Four Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

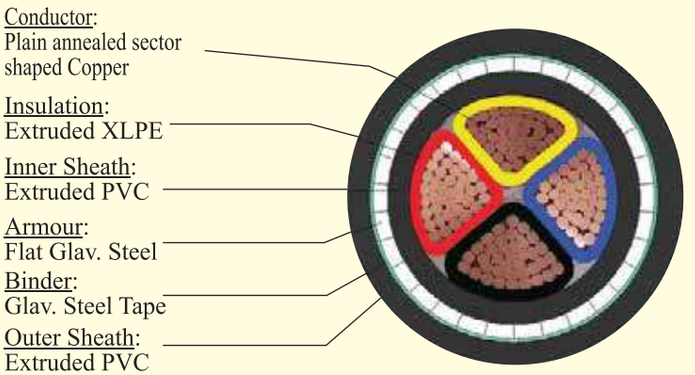
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Flat Galvanized Steel wire as per IEC 60502-1

Binder: Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Dimension of steel strip armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x25 rm	7/2.14	0.9	4x0.8	1.8	25.3	1903	1415	0.727	1.20	130	94	120	96
4x35 sm	min. 6	0.9	4x0.8	1.8	27.1	2219	1475	0.524	0.868	155	114	150	117
4x50 sm	min. 6	1.0	4x0.8	2.0	32	3119	1822	0.387	0.641	190	133	190	142
4x70 sm	min. 12	1.1	4x0.8	2.1	35.5	4113	2227	0.268	0.443	225	164	230	179
4x95 sm	min. 15	1.1	4x0.8	2.2	39.7	5378	2702	0.193	0.320	260	196	270	221
4x120 sm	min. 18/15	1.2	4x0.8	2.4	43.6	7140	3168	0.153	0.253	295	223	305	257
4x150 sm	min. 18/15	1.4	4x0.8	2.5	47.5	7868	3720	0.124	0.206	330	249	350	292
4x185 sm	min. 30	1.6	4x0.8	2.7	53	9874	4408	0.0991	0.164	385	282	410	337
4x240 sm	min. 34/30	1.7	4x0.8	2.9	59.8	12412	5347	0.0754	0.125	425	327	490	400
4x300 sm	min. 34/30	1.8	4x0.8	3.1	66.1	14788	6281	0.0601	0.10	578	368	664	445

2xRGY/ A2xRGY
N2xRGY/ NA2xRGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

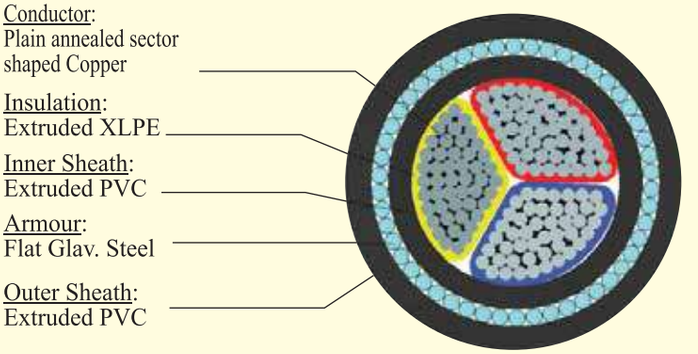
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1

Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow & Blue

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Diameter of round steel Wire armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25 rm	7/2.14	0.9	1.6	1.8	26.4	1682	1203	0.727	1.20	130	94	120	96
3x35 sm	min. 6	0.9	1.6	1.8	27.0	1991	1332	0.524	0.868	155	114	150	117
3x50 sm	min. 6	1.0	1.6	1.9	29.7	2529	1577	0.387	0.641	190	133	190	142
3x70 sm	min. 12	1.1	2.0	2.1	34.0	3571	2233	0.268	0.443	225	164	230	179
3x 95 sm	min. 15	1.1	2.0	2.2	36.8	4561	2756	0.193	0.320	260	196	270	221
3x120 sm	min. 18/15	1.2	2.0	2.3	41.1	5465	3186	0.153	0.253	295	223	305	257
3x150 sm	min. 18/15	1.4	2.5	2.5	46.5	7031	4179	0.124	0.206	330	249	350	292
3x185 sm	min. 30	1.6	2.5	2.6	49.5	8378	4867	0.0991	0.164	385	282	410	337
3x240 sm	min. 34/30	1.7	2.5	2.8	55.8	10453	5879	0.0754	0.125	425	327	490	400
3x300 sm	min. 34/30	1.8	2.5	3.0	59.6	12534	6745	0.0601	0.10	578	368	664	455

2xRGY/ A2xRGY
N2xRGY/ NA2xRGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Three & Half Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

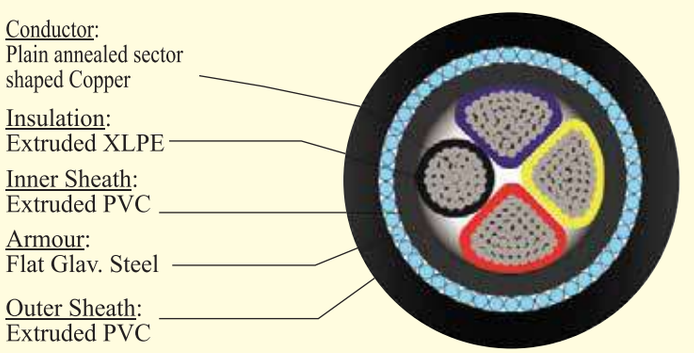
REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1



Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1

Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Diameter of round steel armour Wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
3x25+16 rm/rm	7/2.14	0.9	1.6	1.8	27.5	1919	1337	0.727	1.2	130	94	120	96
	7/1.7	0.7						1.15	1.91				
3x35+16 sm/rm	min. 6	0.9	1.6	1.8	29.3	2363	1596	0.524	0.868	155	114	150	117
	7/1.7	0.7						1.15	1.91				
3x50+25 sm/rm	min. 6	1.0	1.6	2.0	31.9	3105	1995	0.387	0.641	190	133	190	142
	7/2.14	0.9						0.727	1.2				
3x70+35 sm/rm	min. 12	1.1	2.0	2.1	37.9	4153	2595	0.268	0.443	225	164	230	179
	min. 6	0.9						0.524	0.868				
3x95+50 sm/rm	min. 15	1.1	2.0	2.2	42.1	5372	3251	0.193	0.320	260	196	270	221
	min. 6	1.0						0.387	0.641				
3x120+70 sm/rm	min. 18/15	1.2	2.0	2.4	45.8	6921	4197	0.153	0.253	295	223	305	257
	min. 12	1.1						0.268	0.443				
3x150+70 sm/rm	min. 18/15	1.4	2.5	2.5	50.2	8070	4772	0.124	0.206	330	249	350	292
	min. 12	1.1						0.268	0.443				
3x185+95 sm/rm	min. 30	1.6	2.5	2.7	55.1	9655	5543	0.0991	0.164	385	282	410	337
	min. 15	1.1						0.193	0.32				
3x240+120 sm/rm	min. 34/30	1.7	2.5	2.9	61.1	11952	6618	0.0754	0.125	425	327	490	400
	min. 18/15	1.2						0.153	0.253				
3x300+150 sm/rm	min. 34/30	1.8	2.5	3.0	67.0	14563	7837	0.0601	0.10	578	368	664	455
	min. 18/15	1.4						0.124	0.206				

2xRGY/ A2xRGY
N2xRGY/ NA2xRGY

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

XLPE Insulated & PVC Sheathed Four Core Armoured Cable

APPLICATION

Used as Power cable for energy supply is suitable for fixed installations, preferably in cable ducts, indoors, outdoors, in water or underground, in local distribution systems, industrial plants and in commercial buildings if no mechanical damages are to be expected.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

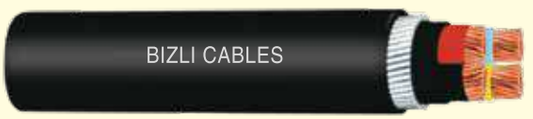
REFERENCE STANDARD

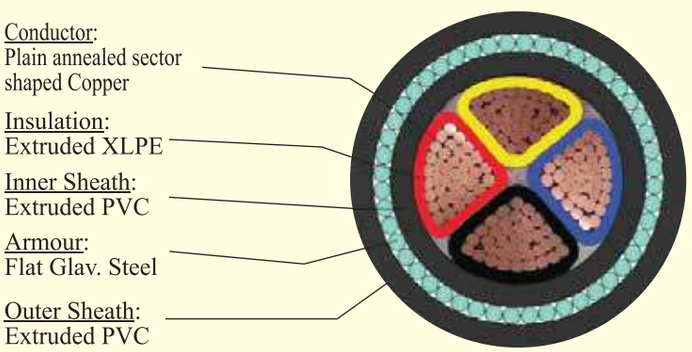
IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Stranded circular/ Sector shaped Copper/ Aluminum, Class-2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1





Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1

Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation: Red, Yellow, Blue & Black

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA					
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire Cu/Al	Nominal thickness of insulation	Diameter of round steel armour wire	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable		Max. D.C Resistance of Conductor at 20°C		Current rating at 30°C in ground		Current rating at 35°C in air	
						Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm²	nos./mm	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	amps	amps	amps	amps
4x25 rm	7/2.14	0.9	1.6	1.8	28.4	2038	1400	0.727	1.2	130	94	120	96
4x35 sm	min. 6	0.9	1.6	1.9	29.4	2509	1622	0.524	0.868	155	114	150	117
4x50 sm	min. 6	1.0	1.6	2.0	33.9	3364	2096	0.387	0.641	190	133	190	142
4x70 sm	min. 12	1.1	2.0	2.2	38.9	4503	2720	0.268	0.443	225	164	230	179
4x95 sm	min. 15	1.1	2.0	2.3	43.2	6198	3791	0.193	0.320	260	196	270	221
4x120 sm	min. 18/15	1.2	2.0	2.5	47.8	7380	4341	0.153	0.253	295	223	305	257
4x150 sm	min. 18/15	1.4	2.5	2.6	51.2	8838	5036	0.124	0.206	330	249	350	292
4x185 sm	min. 30	1.6	2.5	2.8	57.5	10674	5993	0.0991	0.164	385	282	410	337
4x240 sm	min. 34/30	1.7	2.5	3.0	62.4	13362	7263	0.0754	0.125	425	327	490	400
4x300 sm	min. 34/30	1.8	2.5	3.2	68.9	16888	8969	0.0601	0.10	578	368	664	455

2xY-1/ N2xY-1

XLPE Insulated & PVC Sheathed Multi Core Control Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

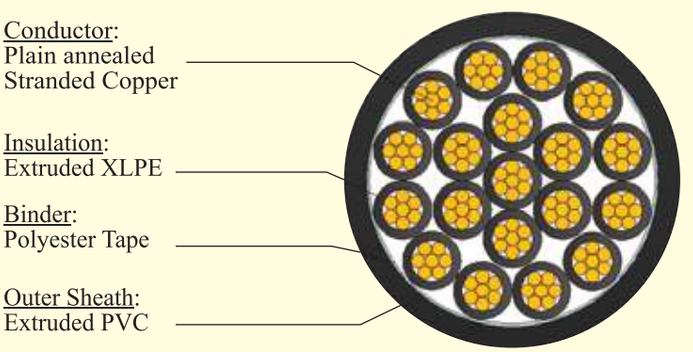
IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded circular Copper, Class-1 & 2 as per IEC 60228

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1

Binder: Polyester tape



Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation:

X= Black with continuous number print

G= Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strand & diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current rating at 30°C in ground	Current rating at 35°C in air
core x mm^2	nos./mm	mm	mm	mm	kg/km	Ω/km	amps	amps
5x1.5 re	1/1.38	0.7	1.8	11.6	175	12.1	20	14
7x1.5 re	1/1.38	0.7	1.8	12.4	215	12.1	18	13
10x1.5 re	1/1.38	0.7	1.8	15.2	290	12.1	14	11
12x1.5 re	1/1.38	0.7	1.8	15.7	335	12.1	13	10
16x1.5 re	1/1.38	0.7	1.8	16.4	410	12.1	12	9
21x1.5 re	1/1.38	0.7	1.8	19.0	525	12.1	10	8
24x1.5 re	1/1.38	0.7	1.8	21.0	600	12.1	10	8
30x1.5 re	1/1.38	0.7	1.8	22.0	720	12.1	9	7
5x2.5 re	1/1.78	0.7	1.8	12.8	230	7.41	26	21
7x2.5 re	1/1.78	0.7	1.8	13.7	282	7.41	23	19
10x2.5 re	1/1.78	0.7	1.8	17.1	388	7.41	20	15
12x2.5 re	1/1.78	0.7	1.8	17.4	460	7.41	18	14
16x2.5 re	1/1.78	0.7	1.8	18.2	570	7.41	15	12
21x2.5 re	1/1.78	0.7	1.8	21.0	750	7.41	14	11
24x2.5 re	1/1.78	0.7	1.8	23.5	850	7.41	13	10
30x2.5 re	1/1.78	0.7	1.8	24.8	1040	7.41	11	9
5x4 rm	7/0.85	0.7	1.8	14.8	335	4.61	33	27
7x4 rm	7/0.85	0.7	1.8	16.0	423	4.61	29	24
10x4 rm	7/0.85	0.7	1.8	19.9	589	4.61	25	21
12x4 rm	7/0.85	0.7	1.8	20.5	684	4.61	23	19

2xRGY-1/ N2xRGY-1

XLPE Insulated & PVC Sheathed Multi Core Armoured Control Cable

RATED VOLTAGE
U_o/U (U_m): 0.6/1.0(1.2) KV
Permissible Service Voltage: 0.72/1.2 KV

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 3.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-1, DIN VDE 0276-603

CONSTRUCTION

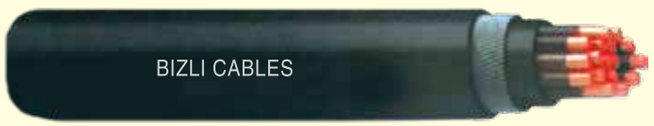
Conductor: Plain annealed Solid/ Stranded circular Copper, Class-1 & 2 as per IEC 60228

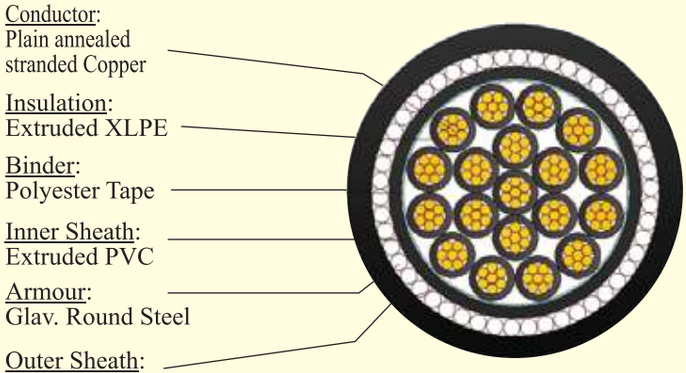
Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-1

Binder: Polyester tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

Armour: Round Galvanized Steel wire as per IEC 60502-1





Binder (optional): Galvanized Steel Tape as per IEC 60502-1

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-1

FR & FRLS Sheath available on request.

COLOR

Insulation:

X= Black with continuous number print

G= Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strands & diameter of wire	Nominal thickness of insulation	Nominal diameter of round steel wire armour	Nominal thickness of sheath	Approx Cable diameter	Approx. weight of cable	Max. D.C Resistance of Conductor at 20°C	Current Carrying Capacity in Ground at 30°C	Current Carrying Capacity in Air at 35°C
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
5 x 1.5 re	1/1.38	0.7	1.25	1.8	16.1	520	12.1	20	14
7 x 1.5 re	1/1 38	0.7	1.25	1.8	17.0	580	12.1	18	13
10 x 1.5 re	1/1.38	0.7	1.25	1.8	19.9	760	12.1	14	11
12 x 1.5 re	1/1.38	0.7	1.25	1.8	20.3	810	12.1	13	10
19 x 1.5 re	1/1.38	0.7	1.6	1.8	23.4	1160	12.1	11	9
24 x 1.5 re	1/1.38	0.7	1.6	1.8	26.4	1380	12.1	10	8
37 x 1.5 re	1/1.38	0.7	1.6	1.8	29.2	1760	12.1	8	6
5 x 2.5 re	1/1.78	0.7	1.25	1.8	17.2	610	7.41	26	21
7 x 2.5 re	1/1.78	0.7	1.25	1.8	18.2	690	7.41	23	19
10 x 2.5 re	1/1.78	0.7	1.25	1.8	21.4	910	7.41	20	15
12 x 2.5 re	1/1.78	0.7	1.25	1.8	22.0	990	7.41	18	14
19 x 2.5 re	1/1.78	0.7	1.6	1.8	25.4	1440	7.41	16	12
24 x 2.5 re	1/1.78	0.7	1.6	1.8	28.8	1730	7.41	13	10
37 x 2.5 re	1/1.78	0.7	1.6	1.9	32.2	2270	7.41	10	8

MEDIUM VOLTAGE CABLE

2xHSY/ A2xHSY

Single Core XLPE Insulated Non-Armoured Medium Voltage Cable

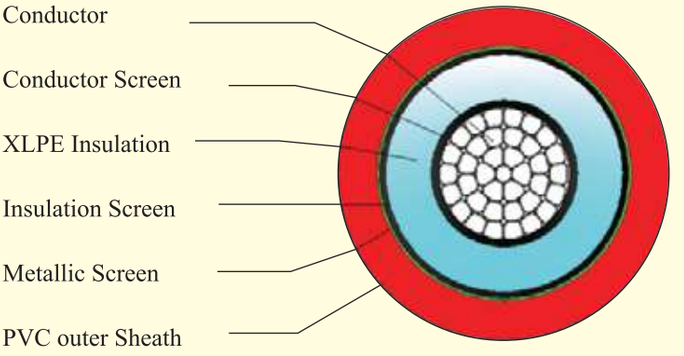
RATED VOLTAGE
U_o/U (U_m): 3.6/6(7.2) KV
Permissible Service Voltage: 3.8/6.5 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 12.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1x25 rm	2.5	1.8	19.0	560	400	0.7270	1.20	0.27	0.433	155	121	160	125
1x35 rm	2.5	1.8	20.0	680	450	0.5240	0.868	0.30	0.412	191	148	190	148
1x50 rm	2.5	1.8	21.5	820	500	0.3870	0.641	0.33	0.384	226	176	229	178
1x70 rm	2.5	1.8	23.0	1065	620	0.2680	0.443	0.37	0.363	280	218	285	222
1x95 rm	2.5	1.8	24.6	1330	725	0.1930	0.320	0.42	0.344	332	258	350	272
1x120 rm	2.5	1.8	26.0	1555	800	0.1530	0.253	0.46	0.330	378	294	410	319
1x150 rm	2.5	1.8	27.6	1850	920	0.1240	0.206	0.49	0.320	425	330	468	363
1x185 rm	2.5	1.8	29.4	2240	1100	0.0991	0.164	0.54	0.309	480	373	542	421
1x240 rm	2.6	1.9	32.0	2830	1350	0.0754	0.125	0.58	0.300	554	430	640	487
1x300 rm	2.8	2.0	34.8	3480	1610	0.0601	0.100	0.60	0.294	625	485	732	567
1x400 rm	3.0	2.1	38.5	4480	2005	0.0470	0.0778	0.64	0.285	716	557	850	661
1x500 rm	3.2	2.2	41.9	5480	2400	0.0366	0.0605	0.65	0.281	792	616	978	761
1x630 rm	3.2	2.3	46.0	6800	2910	0.0283	0.0469	0.73	0.272	902	710	1130	878
1x800 rm	3.2	2.4	50.0	8500	3600	0.0221	0.0367	0.81	0.266	970	753	1290	1001
1x1000 rm	3.2	2.6	54.5	10500	4350	0.01760	0.0291	0.90	0.261	1040	809	1435	1116

2xHSY/ A2xHSY

Single Core XLPE Insulated Non-Armoured Medium Voltage Cable

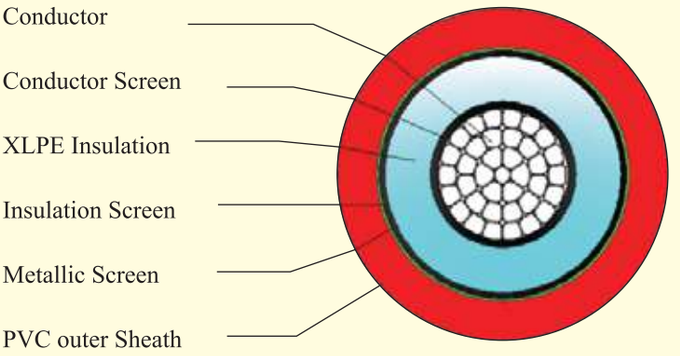
RATED VOLTAGE
U_o/U (U_m):): 6/10(12) KV
Permissible Service Voltage: 6.35/11 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 21 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1 x 25 rm	3.4	1.8	20.8	630	470	0.7270	1.20	0.21	0.452	155	121	160	125
1 x 35 rm	3.4	1.8	22.0	750	530	0.5240	0.868	0.23	0.430	191	148	190	148
1 x 50 rm	3.4	1.8	23.2	900	590	0.3870	0.641	0.26	0.401	226	176	229	178
1 x 70 rm	3.4	1.8	24.8	1140	700	0.2680	0.443	0.29	0.379	280	218	285	222
1 x 95 rm	3.4	1.8	26.5	1410	805	0.1930	0.320	0.33	0.359	332	258	350	272
1 x 120 rm	3.4	1.8	28.0	1650	900	0.1530	0.253	0.35	0.344	378	294	410	319
1 x 150 rm	3.4	1.8	29.4	1950	1030	0.1240	0.206	0.38	0.333	425	330	468	363
1 x 185 rm	3.4	1.9	31.3	2350	1210	0.0991	0.164	0.42	0.323	480	373	542	421
1x 240 rm	3.4	2.0	34.0	2940	1445	0.0754	0.125	0.46	0.312	554	430	640	487
1 x 300 rm	3.4	2.0	36.2	3560	1690	0.0601	0.100	0.50	0.301	625	485	732	567
1 x 400 rm	3.4	2.1	39.7	4530	2060	0.0470	0.0778	0.57	0.290	716	557	850	661
1 x 500 rm	3.4	2.2	42.7	5520	2430	0.0366	0.0605	0.62	0.283	792	616	978	761
1 x 630 rm	3.4	2.3	46.5	6900	2980	0.0283	0.0469	0.70	0.274	902	710	1130	878
1 x 800 rm	3.4	2.5	50.8	8600	3650	0.0221	0.367	0.77	0.268	970	753	1290	1001
1 x 1000 rm	3.4	2.6	55.0	10600	4400	0.0176	0.0291	0.85	0.262	1040	809	1435	1116

2xHSY/ A2xHSY

Single Core XLPE Insulated Non-Armoured Medium Voltage Cable

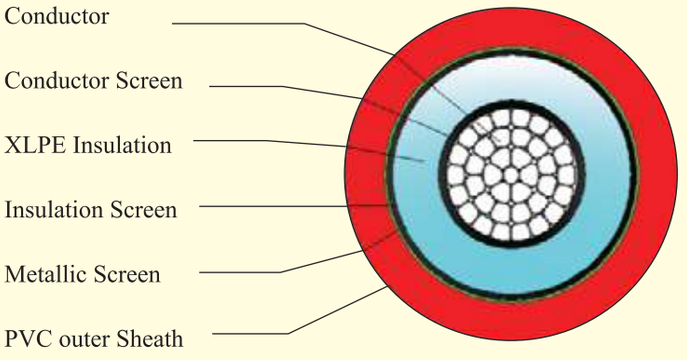
RATED VOLTAGE
U_o/U (U_m):): 8.7/15(17.5) KV
Permissible Service Voltage: 9.2/16.3 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 30.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1 x 25 rm	4.5	1.8	23.0	700	540	0.7270	1.20	0.17	0.473	157	122	163	127
1 x 35 rm	4.5	1.8	24.0	825	610	0.5240	0.868	0.19	0.451	193	150	194	151
1 x 50 rm	4.5	1.8	25.4	990	680	0.3870	0.641	0.21	0.420	228	177	232	180
1 x 70 rm	4.5	1.8	27.0	1230	800	0.2680	0.443	0.23	0.396	282	219	288	224
1 x 95 rm	4.5	1.8	28.7	1510	910	0.1930	0.320	0.26	0.376	334	259	353	274
1 x 120 rm	4.5	1.9	30.2	1780	1030	0.1530	0.253	0.28	0.361	380	296	413	321
1 x 150 rm	4.5	1.9	31.8	2090	1170	0.1240	0.206	0.30	0.355	427	331	471	365
1 x 185 rm	4.5	2.0	33.7	2490	1350	0.0991	0.164	0.33	0.339	482	375	545	424
1x 240 rm	4.5	2.0	36.0	3060	1580	0.0754	0.125	0.36	0.325	556	432	643	499
1 x 300 rm	4.5	2.1	38.6	3700	1835	0.0601	0.10	0.40	0.314	627	486	735	570
1 x 400 rm	4.5	2.2	42.0	4710	2230	0.0470	0.0778	0.45	0.302	718	558	853	663
1 x 500 rm	4.5	2.3	45.0	5750	2640	0.0366	0.0605	0.48	0.295	794	618	981	763
1 x 630 rm	4.5	2.4	50.0	7090	3190	0.0283	0.0469	0.54	0.285	904	702	1133	880
1 x 800 rm	4.5	2.5	53.0	8800	3840	0.0221	0.0367	0.60	0.277	972	754	1293	1003
1 x 1000 rm	4.5	2.7	58.0	11000	4800	0.0176	0.0291	0.66	0.271	1042	810	1438	1118

2xHSY/ A2xHSY

Single Core XLPE Insulated Non-Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m):): 12/20 (24) kv
Permissible Service Voltage: 12.7/22 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 42 kv
Flame Retardant as per IEC 60332

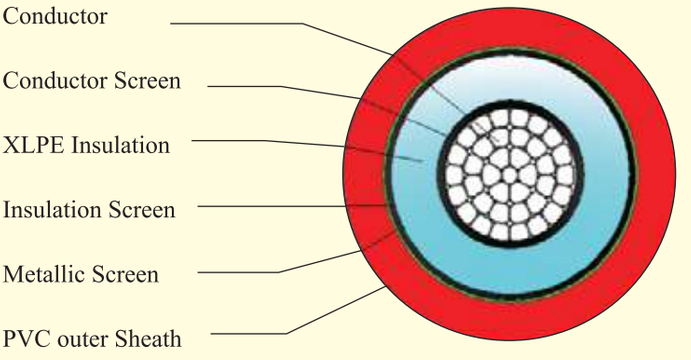
REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon
Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2
Insulation Screen: Semicon



Metallic Screen: Copper Tape
Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2
FR & FRLS Sheath available on request.

COLOR

Insulation: Natural
Sheath: Red

PHYSICAL DATA								ELECTRICAL DATA							
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
										Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm²	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	**Microf/km**	mH/km	amps	amps	amps	amps	amps	amps
1 x 35	5.5	1.8	26.3	930	720	0.524	0.868	0.162	0.467	172	134	159	123	203	157
1 x 50	5.5	1.8	27.4	1100	790	0.387	0.641	0.177	0.436	203	157	188	146	243	189
1 x 70	5.5	1.8	29.0	1330	905	0.268	0.443	0.200	0.411	246	192	229	178	303	236
1 x 95	5.5	1.9	31.0	1620	1050	0.193	0.320	0.222	0.391	293	229	274	213	369	287
1 x 120	5.5	1.9	32.5	1900	1160	0.153	0.253	0.241	0.375	332	260	311	242	426	332
1 x 150	5.5	2	34.2	2240	1320	0.124	0.206	0.257	0.364	366	288	347	271	481	376
1 x 185	5.5	2	36.0	2600	1470	0.0991	0.164	0.280	0.351	410	324	391	307	550	432
1 x 240	5.5	2.1	38.6	3210	1730	0.0754	0.125	0.307	0.338	470	373	453	356	647	511
1 x 300	5.5	2.2	41.0	3850	1990	0.0601	0.100	0.336	0.326	524	419	510	402	739	586
1 x 400	5.5	2.3	44.1	4880	2400	0.0470	0.0778	0.370	0.313	572	466	571	457	837	676
1 x 500	5.5	2.4	47.0	5900	2800	0.0366	0.0605	0.406	0.305	672	546	661	537	938	776
1 x 630	5.5	2.5	51.8	7320	3390	0.0283	0.0469	0.449	0.294	882	646	771	617	1048	886
1 x 800	5.5	2.6	55.7	9100	4050	0.0221	0.0367	0.490	0.286	1002	756	871	717	1148	986
1 x 1000	5.5	2.7	60.2	11200	4820	0.0176	0.0291	0.540	0.278	1112	856	971	807	1238	1086

2xHSY/ A2xHSY

Single Core XLPE Insulated Non-Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m):): 18/30 (36) kv
Permissible Service Voltage: 19/33 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 63 kv
Flame Retardant as per IEC 60332

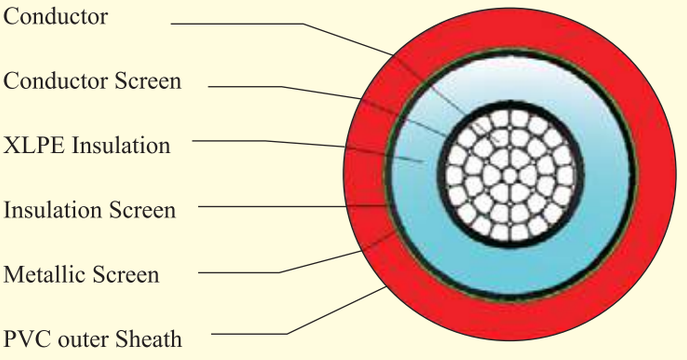
REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon
Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2
Insulation Screen: Semicon



Metallic Screen: Copper Tape
Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2
FR & FRLS Sheath available on request.

COLOR

Insulation: Natural
Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
										Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm²	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	**Microf/km**	mH/km	amps	amps	amps	amps	amps	amps
1 x 50	8.0	1.9	32.5	1380	1070	0.387	0.641	0.138	0.474	203	157	188	146	243	189
1 x 70	8.0	2	34.6	1660	1210	0.268	0.443	0.154	0.449	246	192	229	178	303	236
1 x 95	8.0	2.1	36.5	1980	1370	0.193	0.320	0.169	0.427	293	229	274	213	369	287
1 x 120	8.0	2.1	38.0	2270	1490	0.153	0.253	0.183	0.409	332	260	311	242	426	332
1 x 150	8.0	2.1	39.6	2600	1650	0.124	0.206	0.194	0.396	366	288	347	271	481	376
1 x 185	8.0	2.2	41.5	2950	1830	0.0991	0.164	0.210	0.382	410	324	391	307	550	432
1 x 240	8.0	2.3	44.2	3600	2110	0.0754	0.125	0.229	0.367	470	373	453	356	647	511
1 x 300	8.0	2.3	46.4	4240	2370	0.0601	0.100	0.249	0.353	524	419	510	402	739	586
1 x 400	8.0	2.5	49.8	5350	2855	0.0470	0.0778	0.273	0.339	572	466	571	457	837	676
1 x 500	8.0	2.5	52.8	6400	3270	0.0366	0.0605	0.298	0.328	672	546	661	537	938	776
1 x 630	8.0	2.7	57.3	7850	3890	0.0283	0.0469	0.327	0.316	882	646	771	617	1048	886
1 x 800	8.0	2.8	61.2	9650	4585	0.0221	0.0367	0.350	0.307	1002	756	871	717	1148	986
1 x 1000	8.0	2.9	65.6	11800	5400	0.0176	0.0291	0.380	0.298	1112	856	971	807	1238	1086

2xHSYRaY/ A2xHSYRaY

Single Core XLPE Insulated Armoured Medium Voltage Cable

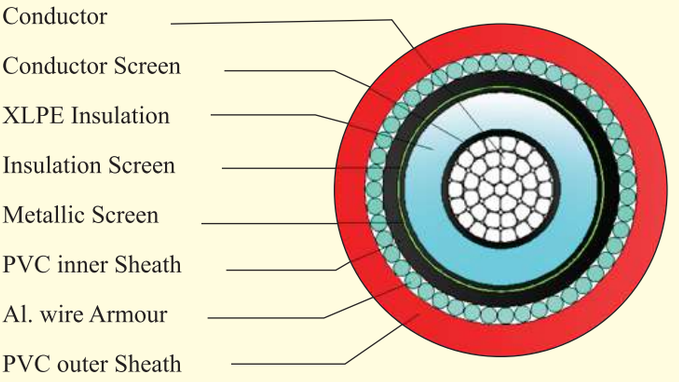
RATED VOLTAGE
U_o/U (U_m):): 3.6/6(7.2) KV
Permissible Service Voltage: 3.8/6.5 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 12.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC)

Armour: Round Aluminium Wire

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of Al. wire Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1 x 25 rm	2.5	1.6	1.8	24.5	870	720	0.7270	1.20	0.27	0.486	152	118	157	122
1 x 35 rm	2.5	1.6	1.8	25.5	1010	790	0.5240	0.868	0.30	0.463	184	143	186	145
1 x 50 rm	2.5	1.6	1.8	26.7	1200	880	0.3870	0.641	0.33	0.432	221	172	224	174
1 x 70 rm	2.5	1.6	1.8	28.3	1450	1010	0.2680	0.443	0.37	0.408	274	213	279	217
1 x 95 rm	2.5	1.6	1.9	30.2	1750	1150	0.1930	0.320	0.42	0.388	325	252	343	266
1 x 120 rm	2.5	1.6	1.9	31.6	2030	1270	0.1530	0.253	0.46	0.371	370	288	402	313
1 x 150 rm	2.5	1.6	2.0	34.0	2400	1470	0.1240	0.206	0.49	0.361	417	324	459	356
1 x 185 rm	2.5	2.0	2.0	36.0	2880	1700	0.0991	0.164	0.54	0.352	470	365	531	413
1x 240 rm	2.6	2.0	2.1	39.0	3540	2030	0.0754	0.125	0.58	0.340	543	422	627	487
1 x 300 rm	2.8	2.0	2.2	42.0	4250	2380	0.0601	0.100	0.60	0.330	613	475	717	556
1 x 400 rm	3.0	2.0	2.3	45.8	5340	2800	0.0470	0.0778	0.64	0.319	702	564	833	647
1 x 500 rm	3.2	2.5	2.5	51.2	6650	3520	0.0366	0.0605	0.65	0.318	776	604	958	745
1 x 630 rm	3.2	2.5	2.6	54.8	8000	4100	0.0283	0.0469	0.73	0.307	884	687	1107	860
1 x 800 rm	3.2	2.5	2.7	59.0	9900	4950	0.0221	0.0367	0.81	0.298	951	738	1264	981
1 x 1000 rm	3.2	2.5	2.9	64.0	12000	5820	0.0176	0.0291	0.90	0.291	1019	792	1406	1093

2xHSYRaY/ A2xHSYRaY

Single Core XLPE Insulated Armoured Medium Voltage Cable

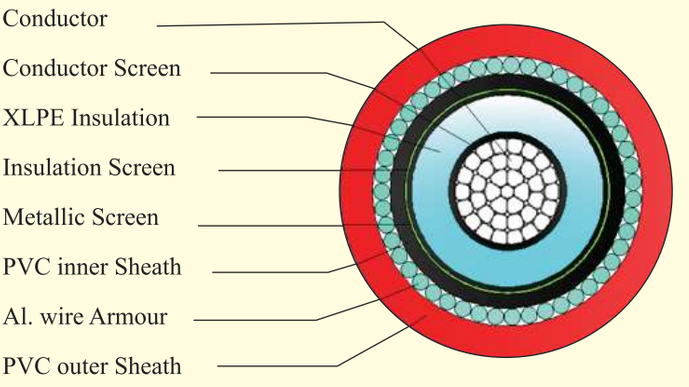
RATED VOLTAGE
U_o/U (U_m):): 6/10(12) KV
Permissible Service Voltage: 6.35/11 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 21 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC)

Armour: Round Aluminium Wire

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of Al. wire Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1 x 25 rm	3.4	1.6	1.8	26.2	1000	840	0.7270	1.20	0.21	0.501	152	118	157	122
1 x 35 rm	3.4	1.6	1.8	27.2	1100	890	0.5240	0.868	0.23	0.478	184	143	186	145
1 x 50 rm	3.4	1.6	1.8	29.0	1320	990	0.3870	0.641	0.26	0.446	221	172	224	174
1 x 70 rm	3.4	1.6	1.9	30.5	1580	1120	0.2680	0.443	0.29	0.422	274	213	279	217
1 x 95 rm	3.4	1.6	1.9	32.2	1880	1280	0.1930	0.320	0.33	0.400	325	252	343	266
1 x 120 rm	3.4	1.6	2.0	34.0	2180	1420	0.1530	0.253	0.35	0.384	370	288	402	313
1 x 150 rm	3.4	2.0	2.0	36.2	2600	1650	0.1240	0.206	0.38	0.378	417	324	459	356
1 x 185 rm	3.4	2.0	2.1	38.5	3050	1900	0.0991	0.164	0.42	0.364	470	365	531	413
1x 240 rm	3.4	2.0	2.2	41.0	3680	2190	0.0754	0.125	0.46	0.350	543	422	627	487
1 x 300 rm	3.4	2.0	2.2	43.2	4350	2490	0.0601	0.100	0.50	0.336	613	475	717	556
1 x 400 rm	3.4	2.0	2.4	47.0	5450	2950	0.0470	0.0778	0.57	0.323	702	564	833	647
1 x 500 rm	3.4	2.5	2.5	51.0	6680	3580	0.0366	0.0605	0.62	0.319	776	604	958	745
1 x 630 rm	3.4	2.5	2.6	55.0	8000	4120	0.0283	0.0469	0.70	0.308	884	687	1107	860
1 x 800 rm	3.4	2.5	2.7	59.0	9900	4950	0.0221	0.0367	0.77	0.299	951	738	1264	981
1 x 1000 rm	3.4	2.5	2.9	64.0	12000	5820	0.0176	0.0291	0.85	0.292	1019	792	1406	1093

2xHSYRaY/ A2xHSYRaY

Single Core XLPE Insulated Armoured Medium Voltage Cable

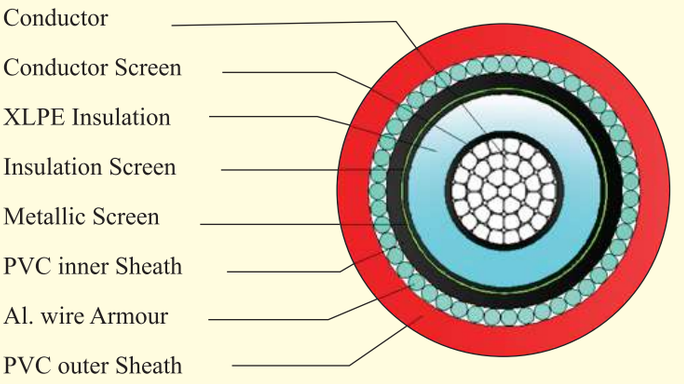
RATED VOLTAGE
U_o/U (U_m): 8.7/15(17.5) KV
Permissible Service Voltage: 9.2/16.3 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 30.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC)

Armour: Round Aluminium Wire

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of Al. wire Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm²	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
1 x 25 rm	4.5	1.6	1.8	28.6	1100	940	0.7270	1.20	0.17	0.518	154	120	160	125
1 x 35 rm	4.5	1.6	1.9	29.9	1260	1040	0.5240	0.868	0.19	0.495	186	145	188	146
1 x 50 rm	4.5	1.6	1.9	31.2	1460	1130	0.3870	0.641	0.21	0.462	223	173	227	176
1 x 70 rm	4.5	1.6	1.9	32.8	1720	1250	0.2680	0.443	0.23	0.437	276	215	282	219
1 x 95 rm	4.5	2.0	2.0	35.5	2130	1510	0.1930	0.320	0.26	0.419	327	254	346	269
1 x 120 rm	4.5	2.0	2.1	37.5	2460	1680	0.1530	0.253	0.28	0.403	372	289	405	315
1 x 150 rm	4.5	2.0	2.1	39.1	2820	1860	0.1240	0.206	0.30	0.390	418	324	462	358
1 x 185 rm	4.5	2.0	2.2	41.0	3230	2080	0.0991	0.164	0.33	0.376	472	367	534	415
1x 240 rm	4.5	2.0	2.3	43.6	3900	2380	0.0754	0.125	0.36	0.362	545	423	630	489
1 x 300 rm	4.5	2.0	2.3	46.0	4550	2680	0.0601	0.100	0.40	0.348	614	476	720	558
1 x 400 rm	4.5	2.5	2.5	51.0	5850	3350	0.0470	0.0778	0.45	0.339	704	547	836	650
1 x 500 rm	4.5	2.5	2.6	54.0	6950	3800	0.0366	0.0605	0.48	0.329	778	605	961	747
1 x 630 rm	4.5	2.5	2.7	57.5	8350	4400	0.0283	0.0469	0.54	0.317	886	688	1110	862
1 x 800 rm	4.5	2.5	2.8	61.9	10200	5250	0.0221	0.0367	0.60	0.308	953	740	1267	983
1 x 1000 rm	4.5	2.5	3.0	66.5	12300	6120	0.0176	0.0291	0.66	0.300	1021	794	1409	1096

2xHSYRaY/ A2xHSYRaY

Single Core XLPE Insulated Armoured Medium Voltage Cable

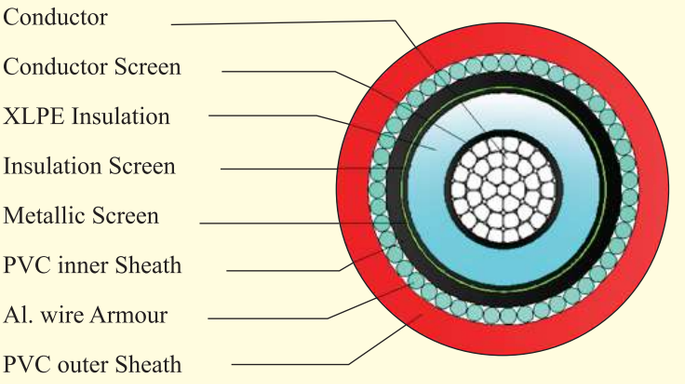
RATED VOLTAGE
U_o/U (U_m):): 12/20 (24) kv
Permissible Service Voltage: 12.7/22 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 42 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC)

Armour: Round Aluminium Wire

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal diameter of Al wire Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
1 x 35	5.5	1.6	1.9	32.0	1400	1180	0.524	0.868	0.162	0.509	172	134	159	123	203	157
1 x 50	5.5	1.6	2	33.2	1600	1290	0.387	0.641	0.177	0.477	203	157	188	146	243	189
1 x 70	5.5	2	2	35.7	1960	1500	0.268	0.443	0.200	0.455	246	192	229	178	303	236
1 x 95	5.5	2	2.1	38.2	2340	1740	0.193	0.320	0.222	0.432	293	229	274	213	369	287
1 x 120	5.5	2	2.1	39.6	2650	1880	0.153	0.253	0.241	0.414	332	260	311	242	426	332
1 x 150	5.5	2	2.2	41.3	3000	2050	0.124	0.206	0.257	0.401	366	288	347	271	481	376
1 x 185	5.5	2	2.2	43.0	3430	2240	0.0991	0.164	0.280	0.386	410	324	391	307	550	432
1 x 240	5.5	2.5	2.3	45.6	4100	2560	0.0754	0.125	0.307	0.371	470	373	453	356	647	511
1 x 300	5.5	2.5	2.4	49.1	4930	3030	0.0601	0.100	0.336	0.363	524	419	510	402	739	586
1 x 400	5.5	2.5	2.5	52.6	6050	3570	0.0470	0.0778	0.370	0.347	572	466	571	457	837	676
1 x 500	5.5	2.5	2.6	55.8	7180	4050	0.0366	0.0605	0.406	0.338	672	546	661	537	938	776
1 x 630	5.5	2.5	2.8	60.0	8720	4730	0.0283	0.0469	0.449	0.325	882	646	771	617	1048	886
1 x 800	5.5	2.5	2.9	64.5	10600	5550	0.0221	0.0367	0.490	0.316	1002	756	871	717	1148	986
1 x 1000	5.5	2.5	3.0	69.0	12850	6470	0.0176	0.0291	0.540	0.307	1112	856	971	807	1238	1086

2xHSYRaY/ A2xHSYRaY

Single Core XLPE Insulated Armoured Medium Voltage Cable

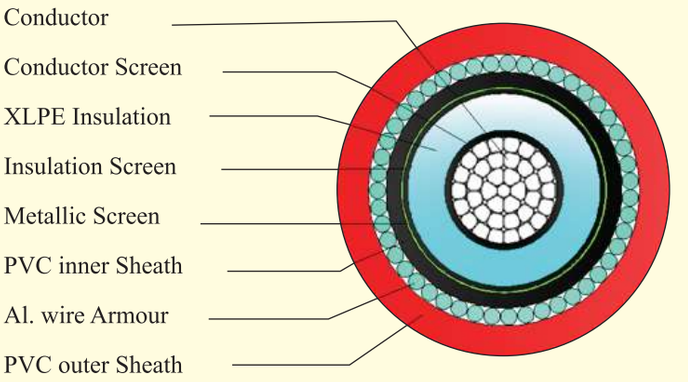
RATED VOLTAGE
U_o/U (U_m):): 18/30 (36) kv
Permissible Service Voltage: 19/33 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 63 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC)

Armour: Round Aluminium Wire

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal diameter of Al wire Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm²	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
1 x 50	8.0	2	2.2	40.0	2120	1800	0.387	0.641	0.138	0.514	203	157	188	146	243	189
1 x 70	8.0	2	2.2	42.0	2450	1860	0.268	0.443	0.154	0.486	246	192	229	178	303	236
1 x 95	8.0	2	2.3	43.6	2780	2060	0.193	0.320	0.169	0.462	293	229	274	213	369	287
1 x 120	8.0	2	2.3	45.2	3080	2260	0.153	0.253	0.183	0.442	332	260	311	242	426	332
1 x 150	8.0	2.5	2.4	48.2	3630	2590	0.124	0.206	0.194	0.434	366	288	347	271	481	376
1 x 185	8.0	2.5	2.5	49.8	4080	2760	0.0991	0.164	0.210	0.419	410	324	391	307	550	432
1 x 240	8.0	2.5	2.5	52.7	4800	3100	0.0754	0.125	0.229	0.401	470	373	453	356	647	511
1 x 300	8.0	2.5	2.6	55.2	5560	3450	0.0601	0.100	0.249	0.387	524	419	510	402	739	586
1 x 400	8.0	2.5	2.7	58.4	6650	4100	0.0470	0.0778	0.273	0.370	572	466	571	457	837	676
1 x 500	8.0	2.5	2.8	61.4	7800	4700	0.0366	0.0605	0.298	0.359	672	546	661	537	938	776
1 x 630	8.0	2.5	2.9	66.2	9400	5300	0.0283	0.0469	0.327	0.345	882	646	771	617	1048	886
1 x 800	8.0	2.5	3.1	70.0	11300	6280	0.0221	0.0367	0.350	0.334	1002	756	871	717	1148	986
1 x 1000	8.0	2.5	3.2	74.6	13600	7300	0.0176	0.0291	0.380	0.324	1112	856	971	807	1238	1086

2xSEYY/ A2xSEYY

Three Core XLPE Insulated Non-Armoured Medium Voltage Cable

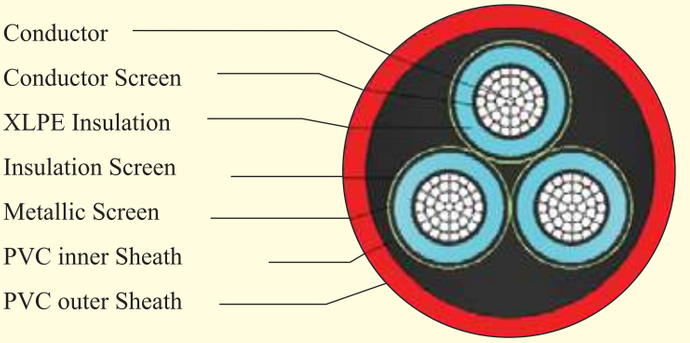
RATED VOLTAGE
U_o/U (U_m): 3.6/6(7.2) KV
Permissible Service Voltage: 3.8/6.5 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 12.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	2.5	2.1	40.0	2240	1780	0.7270	1.20	0.27	0.387	146	114	148	115
3 x 35 rm	2.5	2.1	42.5	2650	1950	0.5240	0.868	0.30	0.369	184	143	185	143
3 x 50 rm	2.5	2.2	45.8	3200	2250	0.3870	0.641	0.33	0.343	220	171	220	171
3 x 70 rm	2.5	2.3	49.5	4100	2700	0.2680	0.443	0.37	0.325	272	212	273	212
3 x 95 rm	2.5	2.5	54.0	5150	3250	0.1930	0.320	0.42	0.309	327	254	336	281
3 x 120 rm	2.5	2.6	57.5	5900	3600	0.1530	0.253	0.46	0.297	366	285	382	297
3 x 150 rm	2.5	2.7	61.0	7100	4200	0.1240	0.206	0.49	0.289	415	322	440	341
3 x 185 rm	2.5	2.8	65.0	8400	4800	0.0991	0.164	0.54	0.280	460	358	508	395
3 x 240 rm	2.6	3.0	71.5	10500	5900	0.0754	0.125	0.58	0.273	532	413	586	455
3 x 300 rm	2.8	3.2	78.0	12850	7100	0.0601	0.100	0.60	0.267	573	444	617	478

2xSEYY/ A2xSEYY

Three Core XLPE Insulated Non-Armoured Medium Voltage Cable

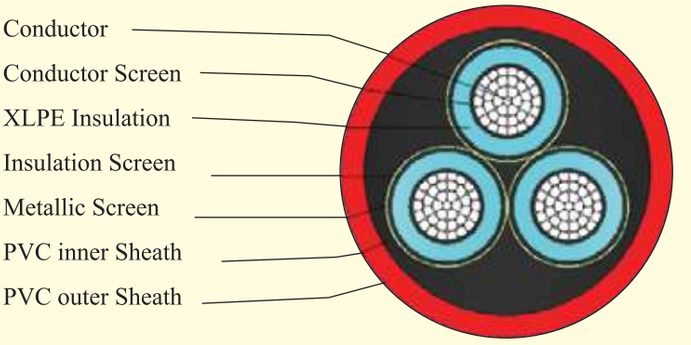
RATED VOLTAGE
U_o/U (U_m): 6/10(12) KV
Permissible Service Voltage: 6.35/11 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 21 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	3.4	2.2	44.5	2560	2000	0.7270	1.20	0.21	0.410	146	114	148	115
3 x 35 rm	3.4	2.3	47.0	3055	2350	0.5240	0.868	0.23	0.391	184	143	185	143
3 x 50 rm	3.4	2.4	51.0	3600	2650	0.3870	0.641	0.26	0.364	220	171	220	171
3 x 70 rm	3.4	2.5	54.0	4495	3150	0.2680	0.443	0.29	0.344	272	212	273	212
3 x 95 rm	3.4	2.6	58.0	5555	3650	0.1930	0.320	0.33	0.327	327	254	336	281
3 x 120 rm	3.4	2.7	62.0	6400	4150	0.1530	0.253	0.35	0.314	366	285	382	297
3 x 150 rm	3.4	2.8	65.0	7500	4700	0.1240	0.206	0.38	0.304	415	322	440	341
3 x 185 rm	3.4	2.9	68.5	8900	5400	0.0991	0.164	0.42	0.295	460	358	508	395
3 x 240 rm	3.4	3.1	74.5	10925	6350	0.0754	0.125	0.46	0.284	532	413	586	455
3 x 300 rm	3.4	3.3	80.0	13200	7500	0.0601	0.100	0.50	0.275	573	444	617	478

2xSEYY/ A2xSEYY

Three Core XLPE Insulated Non-Armoured Medium Voltage Cable

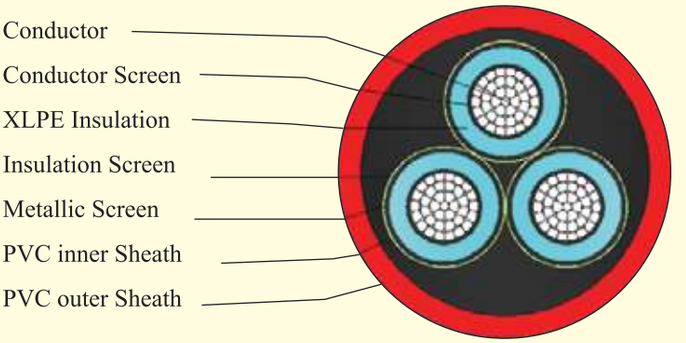
RATED VOLTAGE
U_o/U (U_m): 8.7/15(17.5) KV
Permissible Service Voltage: 9.2/16.3 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 30.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	4.5	2.4	51.0	3075	2550	0.7270	1.20	0.17	0.436	148	115	151	118
3 x 35 rm	4.5	2.5	54.0	3540	2850	0.5240	0.868	0.19	0.415	186	145	188	146
3 x 50 rm	4.5	2.6	57.0	4250	3280	0.3870	0.641	0.21	0.386	222	172	223	173
3 x 70 rm	4.5	2.7	61.0	5100	3720	0.2680	0.443	0.23	0.365	274	213	276	215
3 x 95 rm	4.5	2.8	65.0	6200	4330	0.1930	0.320	0.26	0.346	329	256	339	283
3 x 120 rm	4.5	2.9	68.0	7000	4710	0.1530	0.253	0.28	0.332	368	286	385	299
3 x 150 rm	4.5	3.0	72.0	8200	5340	0.1240	0.206	0.30	0.332	417	324	443	344
3 x 185 rm	4.5	3.1	76.0	9600	6000	0.0991	0.164	0.33	0.311	462	359	511	397
3 x 240 rm	4.5	3.3	81.0	11700	7000	0.0754	0.125	0.36	0.299	534	415	589	457
3 x 300 rm	4.5	3.4	86.0	13960	8080	0.0601	0.100	0.40	0.289	575	446	620	481

2xSEYY/ A2xSEYY

Three Core XLPE Insulated Non-Armoured Medium Voltage Cable

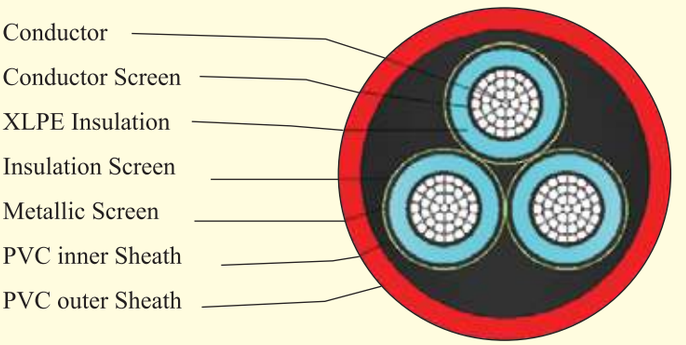
RATED VOLTAGE
U_o/U (U_m):): 12/20 (24) kv
Permissible Service Voltage: 12.7/22 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 42 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA								ELECTRICAL DATA							
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
										Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm²	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
3 x 35	5.5	2.6	59.0	4010	3150	0.524	0.868	0.162	0.435	153	119	133	103	170	132
3 x 50	5.5	2.7	63.0	4650	3760	0.387	0.641	0.177	0.405	181	140	158	122	204	158
3 x 70	5.5	2.8	66.0	5610	4250	0.268	0.443	0.200	0.383	221	171	193	150	253	196
3 x 95	5.5	2.9	71.0	6740	4900	0.193	0.320	0.222	0.363	262	203	231	179	304	236
3 x 120	5.5	3.0	74.0	7570	5280	0.153	0.253	0.241	0.347	298	232	264	205	351	273
3 x 150	5.5	3.1	76.0	8770	5950	0.124	0.206	0.257	0.337	334	260	297	231	398	309
3 x 185	5.5	3.3	81.0	10280	6560	0.0991	0.164	0.280	0.325	377	294	336	262	455	355
3 x 240	5.5	3.4	85.0	12390	7600	0.0754	0.125	0.307	0.312	434	340	390	305	531	415
3 x 300	5.5	3.6	91.8	14700	8800	0.0601	0.100	0.336	0.301	489	384	441	346	606	475

2xSEYY/ A2xSEYY

Three Core XLPE Insulated Non-Armoured Medium Voltage Cable

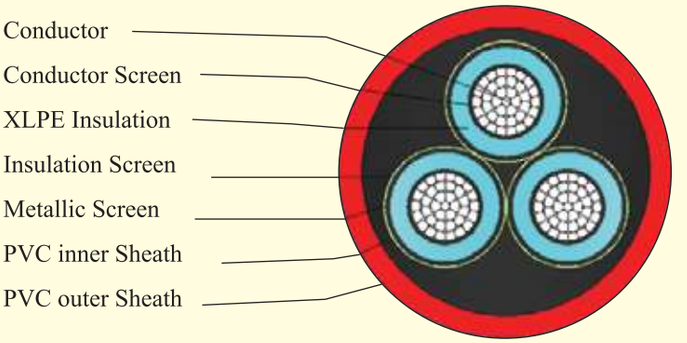
RATED VOLTAGE
U_o/U (U_m):):18/30 (36) kv
Permissible Service Voltage: 19/33 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 63 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA						ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
										Laid direct flat spaced		Laid in single duct flat touching		Laid in direct in flat touching	
				Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm²	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
3 x 50	8.0	3.1	76.0	6200	5200	0.387	0.641	0.138	0.448	181	140	158	122	204	158
3 x 70	8.0	3.2	80.0	7300	5950	0.268	0.443	0.154	0.423	221	171	193	150	253	195
3 x 95	8.0	3.3	84.0	8510	6500	0.193	0.320	0.169	0.401	262	203	231	179	304	236
3 x 120	8.0	3.4	87.0	9420	7050	0.153	0.253	0.183	0.384	298	232	264	205	351	273
3 x 150	8.0	3.5	91.0	10620	7720	0.124	0.206	0.194	0.371	334	260	297	231	398	309
3 x 185	8.0	3.6	95.0	12180	8580	0.0991	0.164	0.210	0.358	377	294	336	262	455	355
3 x 240	8.0	3.8	100.0	14450	9700	0.0754	0.125	0.229	0.343	434	340	390	305	531	415
3 x 300	8.0	4.0	105.0	16970	11000	0.0601	0.100	0.249	0.330	489	384	441	346	606	475

2xSEYFGY/ A2xSEYFGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

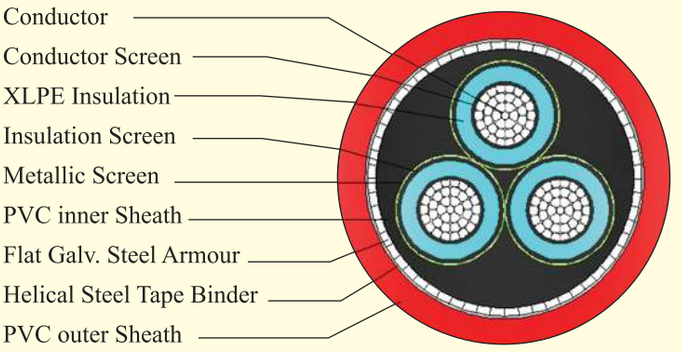
RATED VOLTAGE
U_o/U (U_m): 3.6/6(7.2) KV
Permissible Service Voltage: 3.8/6.5 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 12.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Armour: Flat Galvanized Steel Wire as per IEC 60502-2

Binder: Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Dimension of steel strip Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm²	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	2.5	4x0.8	2.1	43.0	3050	2600	0.7270	1.20	0.27	0.387	145	113	147	114
3 x 35 rm	2.5	4x0.8	2.2	45.8	3550	2900	0.5240	0.868	0.30	0.369	182	141	183	142
3 x 50 rm	2.5	4x0.8	2.3	49.0	4160	3280	0.3870	0.641	0.33	0.343	218	169	218	169
3 x 70 rm	2.5	4x0.8	2.4	52.7	5120	3860	0.2680	0.443	0.37	0.325	269	209	270	210
3 x 95 rm	2.5	4x0.8	2.5	57.0	6260	4550	0.1930	0.320	0.42	0.310	324	252	333	259
3 x 120 rm	2.5	4x0.8	2.6	60.0	7200	5000	0.1530	0.253	0.46	0.298	362	282	378	294
3 x 150 rm	2.5	4x0.8	2.7	64.0	8350	5580	0.1240	0.206	0.49	0.289	411	319	436	338
3 x 185 rm	2.5	4x0.8	2.9	68.0	9780	6370	0.0991	0.164	0.54	0.281	455	354	503	391
3 x 240 rm	2.6	4x0.8	3.0	74.0	11900	7480	0.0754	0.125	0.58	0.273	527	409	580	450
3 x 300 rm	2.8	4x0.8	3.2	80.5	14450	8900	0.0601	0.100	0.60	0.267	567	440	611	474

2xSEYFGY/ A2xSEYFGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

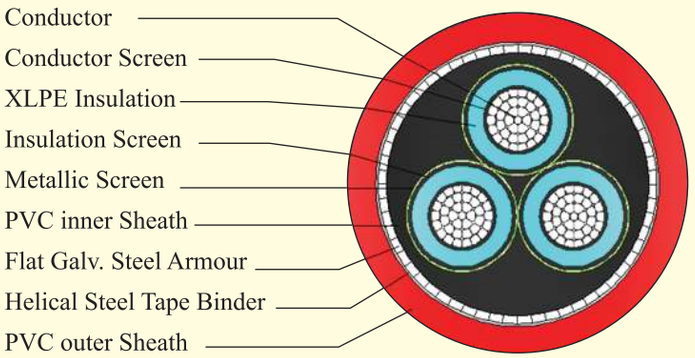
RATED VOLTAGE
U_o/U (U_m): 6/10(12) KV
Permissible Service Voltage: 6.35/11 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 21 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Armour: Flat Galvanized Steel Wire as per IEC 60502-2

Binder: Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Dimension of steel strip Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	3.4	4x0.8	2.2	47.5	3460	2950	0.7270	1.20	0.21	0.410	145	113	147	114
3 x 35 rm	3.4	4x0.8	2.3	50.0	4000	3350	0.5240	0.868	0.23	0.391	182	141	183	142
3 x 50 rm	3.4	4x0.8	2.4	53.5	4630	3750	0.3870	0.641	0.26	0.363	218	169	218	169
3 x 70 rm	3.4	4x0.8	2.6	57.0	5570	4300	0.2680	0.443	0.29	0.344	269	209	270	210
3 x 95 rm	3.4	4x0.8	2.7	61.5	6700	5000	0.1930	0.320	0.33	0.327	324	252	333	259
3 x 120 rm	3.4	4x0.8	2.8	65.0	7750	5550	0.1530	0.253	0.35	0.313	362	282	378	294
3 x 150 rm	3.4	4x0.8	2.9	68.0	8830	6150	0.1240	0.206	0.38	0.304	411	319	436	338
3 x 185 rm	3.4	4x0.8	3.0	72.5	10320	6910	0.0991	0.164	0.42	0.294	455	354	503	391
3 x 240 rm	3.4	4x0.8	3.2	78.0	12500	8100	0.0754	0.125	0.46	0.284	527	409	580	450
3 x 300 rm	3.4	4x0.8	3.3	83.0	14900	9400	0.0601	0.100	0.50	0.275	567	440	611	474

2xSEYFGY/ A2xSEYFGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m): 8.7/15(17.5) KV
Permissible Service Voltage: 9.2/16.3 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 30.5 KV
Flame Retardant as per IEC 60332

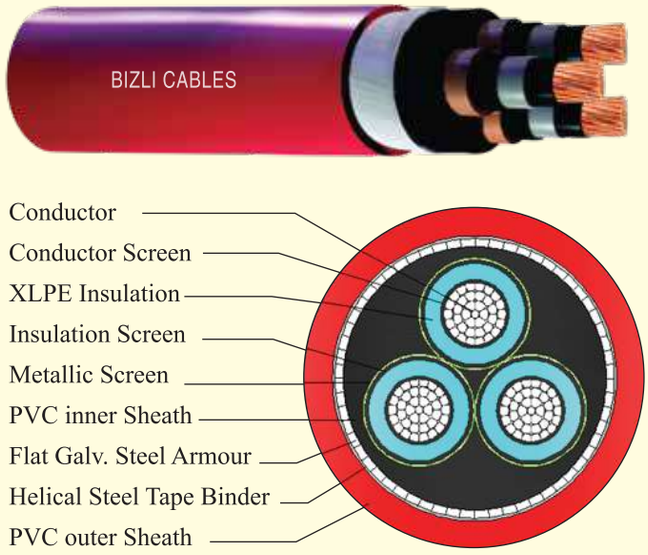
REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon
Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2
Insulation Screen: Semicon
Metallic Screen: Copper Tape
Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2



Armour: Flat Galvanized Steel Wire as per IEC 60502-2
Binder: Galvanized Steel Tape
Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2
FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)
Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Dimension of steel strip Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	4.5	4x0.8	2.4	53.0	4100	3650	0.7270	1.20	0.17	0.436	145	113	147	114
3 x 35 rm	4.5	4x0.8	2.5	56.0	4620	4000	0.5240	0.868	0.19	0.416	184	143	186	145
3 x 50 rm	4.5	4x0.8	2.6	59.0	5300	4400	0.3870	0.641	0.21	0.387	220	171	222	172
3 x 70 rm	4.5	4x0.8	2.7	62.5	6280	5020	0.2680	0.443	0.23	0.366	271	211	273	212
3 x 95 rm	4.5	4x0.8	2.8	66.0	7500	5780	0.1930	0.320	0.26	0.347	326	253	336	261
3 x 120 rm	4.5	4x0.8	2.9	70.0	8420	6250	0.1530	0.253	0.28	0.332	364	283	380	296
3 x 150 rm	4.5	4x0.8	3.0	73.5	9600	6910	0.1240	0.206	0.30	0.322	413	320	439	314
3 x 185 rm	4.5	4x0.8	3.2	78.0	11100	7800	0.0991	0.164	0.33	0.211	457	355	506	393
3 x 240 rm	4.5	4x0.8	3.3	83.0	13400	9050	0.0754	0.125	0.36	0.300	530	412	583	453
3 x 300 rm	4.5	4x0.8	3.5	89.0	15700	10200	0.0601	0.100	0.40	0.289	570	442	611	476

2xSEYFGY/ A2xSEYFGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

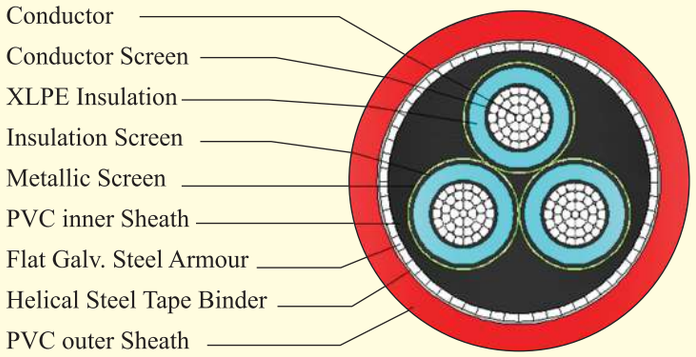
RATED VOLTAGE
U_o/U (U_m):):12/20 (24) kv
Permissible Service Voltage: 12.7/22 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 42 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Armour: Flat Galvanized Steel Wire as per IEC 60502-2

Binder: Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Dimension of steel strip Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											In a buried direct		In a buried duct		Laid in direct in flat touching	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
3 x 35	5.5	4 x 0.8	2.7	61.0	5180	4560	0.524	0.868	0.162	0.435	154	119	134	104	172	133
3 x 50	5.5	4 x 0.8	2.8	64.4	5900	5160	0.387	0.641	0.177	0.405	181	140	158	123	205	159
3 x 70	5.5	4 x 0.8	2.9	68.0	6930	5820	0.268	0.443	0.200	0.383	220	171	194	150	253	196
3 x 95	5.5	4 x 0.8	3.0	71.8	8170	6600	0.193	0.320	0.222	0.363	263	204	232	180	307	238
3 x 120	5.5	4 x 0.8	3.1	75.3	9120	7110	0.153	0.253	0.241	0.347	298	232	264	206	352	274
3 x 150	5.5	4 x 0.8	3.2	78.9	10330	7850	0.124	0.206	0.257	0.337	332	259	296	231	397	309
3 x 185	5.5	4 x 0.8	3.3	83.0	11900	8820	0.0991	0.164	0.280	0.325	374	293	335	262	453	354
3 x 240	5.5	4 x 0.8	3.5	88.5	14100	9900	0.0754	0.125	0.307	0.312	431	338	387	304	529	415
3 x 300	5.5	4 x 0.8	3.6	93.5	16500	11200	0.0601	0.100	0.336	0.301	482	380	435	343	599	472

2xSEYFGY/ A2xSEYFGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m):): 18/30 (36) kv
Permissible Service Voltage: 19/33 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 63 kv
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

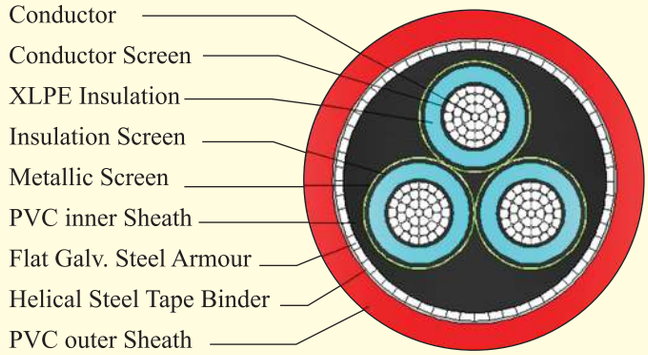
Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2



Armour: Flat Galvanized Steel Wire as per IEC 60502-2

Binder: Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Dimension of steel strip Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											In a buried direct		In a buried duct		Laid in direct in flat touching	
					Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	**Microf/km**	mH/km	amps	amps	amps	amps	amps	amps
3 x 50	8.0	4 x 0.8	3.1	76.0	7450	6750	0.387	0.641	0.138	0.445	181	140	158	123	205	159
3 x 70	8.0	4 x 0.8	3.2	80.6	8650	7600	0.268	0.443	0.154	0.420	220	171	194	150	253	196
3 x 95	8.0	4 x 0.8	3.4	85.0	10050	8470	0.193	0.320	0.169	0.398	263	204	232	180	307	238
3 x 120	8.0	4 x 0.8	3.5	88.0	11000	9020	0.153	0.253	0.183	0.381	298	232	264	206	352	274
3 x 150	8.0	4 x 0.8	3.6	90.8	12250	9800	0.124	0.206	0.194	0.369	332	259	296	231	397	309
3 x 185	8.0	4 x 0.8	3.7	95.0	13840	10800	0.0991	0.164	0.210	0.356	374	293	335	262	453	354
3 x 240	8.0	4 x 0.8	3.9	100.8	16250	12080	0.0754	0.125	0.229	0.341	431	338	387	304	529	415
3 x 300	8.0	4 x 0.8	4.0	105.6	18800	13600	0.0601	0.100	0.249	0.328	482	380	435	343	599	472

2xSEYRGY/ A2xSEYRGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

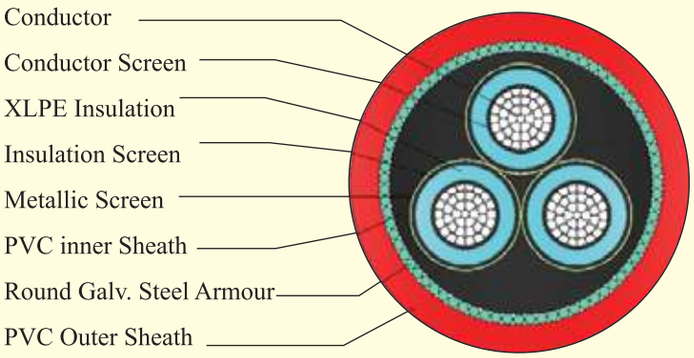
RATED VOLTAGE
U_o/U (U_m): 3.6/6(7.2) KV
Permissible Service Voltage: 3.8/6.5 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 12.5 KV
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Armour: Round Galvanized Steel Wire as per IEC 60502-2

Binder (optional): Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of steel wire Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm²	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	2.5	2.0	2.2	45.0	3650	3170	0.7270	1.20	0.27	0.387	145	113	147	114
3 x 35 rm	2.5	2.0	2.3	48.0	4200	3500	0.5240	0.868	0.39	0.369	182	141	183	142
3 x 50 rm	2.5	2.5	2.4	52.0	5200	4270	0.3870	0.641	0.33	0.343	218	169	218	169
3 x 70 rm	2.5	2.5	2.5	56.0	6300	5000	0.2680	0.443	0.37	0.325	269	209	270	210
3 x 95 rm	2.5	2.5	2.7	60.0	7520	5720	0.1930	0.320	0.42	0.310	324	252	333	259
3 x 120 rm	2.5	2.5	2.8	64.0	8500	6220	0.1530	0.253	0.46	0.298	362	282	378	294
3 x 150 rm	2.5	2.5	2.9	67.0	9700	6900	0.1240	0.206	0.49	0.289	411	319	436	338
3 x 185 rm	2.5	2.5	3.0	71.0	11240	7750	0.0991	0.164	0.54	0.281	455	354	503	391
3 x 240 rm	2.6	2.5	3.2	77.0	13560	9050	0.0754	0.125	0.58	0.273	527	409	580	450
3 x 300 rm	2.8	3.15	3.4	85.0	17000	11400	0.0601	0.100	0.60	0.267	567	440	611	474

2xSEYRGY/ A2xSEYRGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m): 6/10(12) KV
Permissible Service Voltage: 6.35/11 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 21 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

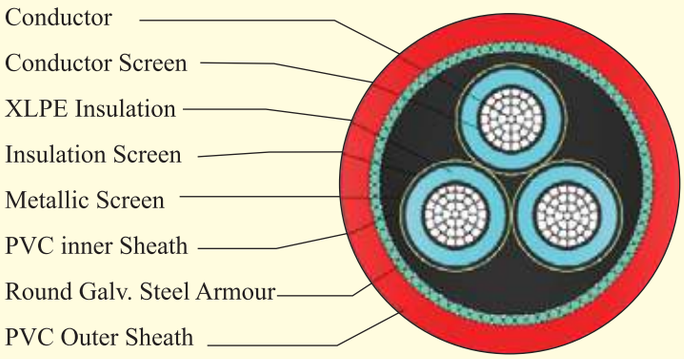
Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2



Armour: Round Galvanized Steel Wire as per IEC 60502-2

Binder (optional): Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of round steel Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	3.4	2.0	2.3	49.5	4130	3660	0.7270	1.20	0.21	0.410	145	113	147	114
3 x 35 rm	3.4	2.5	2.4	53.0	5195	4520	0.5240	0.868	0.23	0.391	182	141	183	142
3 x 50 rm	3.4	2.5	2.5	56.0	5835	4920	0.3870	0.641	0.26	0.363	218	169	218	169
3 x 70 rm	3.4	2.5	2.7	60.5	6920	5620	0.2680	0.443	0.29	0.344	269	209	270	210
3 x 95 rm	3.4	2.5	2.8	64.5	8140	6350	0.1930	0.320	0.33	0.327	324	252	333	259
3 x 120 rm	3.4	2.5	2.9	68.4	9130	6880	0.1530	0.253	0.35	0.313	362	282	378	294
3 x 150 rm	3.4	2.5	3.0	72.0	10340	7540	0.1240	0.206	0.38	0.304	411	319	436	338
3 x 185 rm	3.4	2.5	3.1	75.5	11940	8450	0.0991	0.164	0.42	0.294	455	354	503	391
3 x 240 rm	3.4	3.15	3.3	82.5	15070	10500	0.0754	0.125	0.46	0.284	527	409	580	450
3 x 300 rm	3.4	3.15	3.5	88.0	17690	12000	0.0601	0.100	0.50	0.275	567	440	611	474

2xSEYRGY/ A2xSEYRGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m): 8.7/15(17.5) KV
Permissible Service Voltage: 9.2/16.3 KV

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 30.5 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

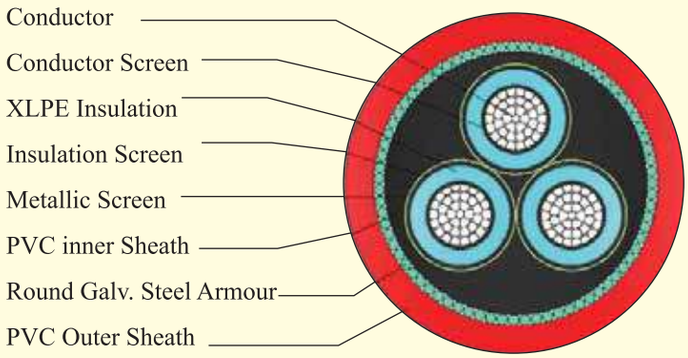
Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2



Armour: Round Galvanized Steel Wire as per IEC 60502-2

Binder (optional): Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA							
Nominal Cross Sectional Area of Conductor	Nominal insulation thickness	Nominal diameter of round steel Armour	Nominal Over sheath thickness	Approx Overall Dia. of cable	Approx weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx Capacitance of Cable	Approx Inductance of Cable	Current rating at 20°C in ground		Current rating at 30°C in air	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps
3 x 25 rm	4.5	2.5	2.5	56.0	5310	4830	0.7270	1.20	0.17	0.436	145	113	147	114
3 x 35 rm	4.5	2.5	2.6	59.0	5900	5230	0.5240	0.868	0.19	0.416	184	143	186	145
3 x 50 rm	4.5	2.5	2.7	62.5	6700	5750	0.3870	0.641	0.21	0.387	220	171	222	172
3 x 70 rm	4.5	2.5	2.8	66.0	7730	6430	0.2680	0.443	0.23	0.366	271	211	273	212
3 x 95 rm	4.5	2.5	3.0	70.5	9025	7230	0.1930	0.320	0.26	0.347	326	253	336	261
3 x 120 rm	4.5	2.5	3.1	73.5	10100	7800	0.1530	0.253	0.28	0.332	364	283	380	296
3 x 150 rm	4.5	2.5	3.2	78.0	11400	8500	0.1240	0.206	0.30	0.322	413	320	439	314
3 x 185 rm	4.5	3.15	3.3	83.0	13800	10300	0.0991	0.164	0.33	0.311	457	355	506	393
3 x 240 rm	4.5	3.15	3.5	88.5	16190	11650	0.0754	0.125	0.36	0.300	530	412	583	453
3 x 300 rm	4.5	3.15	3.6	93.5	18740	13100	0.0601	0.100	0.40	0.289	570	442	614	476

COMMUNICATION CABLE

2xSEYRGY/ A2xSEYRGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

RATED VOLTAGE
U_o/U (U_m):):12/20 (24) kv
Permissible Service Voltage: 12.7/22 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 42 kv
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

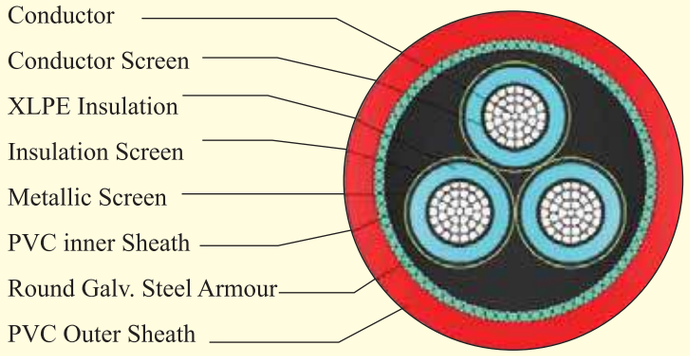
Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2



Armour: Round Galvanized Steel Wire as per IEC 60502-2

Binder (optional): Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal Diameter of Round steel Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											In a buried direct		In a buried duct		Laid in direct in flat touching	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
3 x 35	5.5	2.5	2.8	65.2	6600	5900	0.524	0.868	0.162	0.435	154	119	134	104	172	133
3 x 50	5.5	2.5	2.9	68.5	7360	6470	0.387	0.641	0.177	0.405	181	140	158	123	205	159
3 x 70	5.5	2.5	3.0	72.4	8500	7200	0.268	0.443	0.200	0.383	220	171	194	150	253	196
3 x 95	5.5	2.5	3.1	76.6	9800	8000	0.193	0.320	0.222	0.363	263	204	232	180	307	238
3 x 120	5.5	2.5	3.2	79.5	10750	8500	0.153	0.253	0.241	0.347	298	232	264	206	352	274
3 x 150	5.5	3.15	3.4	85.0	13100	10220	0.124	0.206	0.257	0.337	332	259	296	231	397	309
3 x 185	5.5	3.15	3.5	89.0	14750	11250	0.0991	0.164	0.280	0.325	374	293	335	262	453	354
3 x 240	5.5	3.15	3.6	94.0	17200	12560	0.0754	0.125	0.307	0.312	431	338	387	304	529	415
3 x 300	5.5	3.15	3.8	99.2	19750	14000	0.0601	0.100	0.336	0.301	482	380	435	343	599	472

2xSEYRGY/ A2xSEYRGY

Three Core XLPE Insulated Armoured Medium Voltage Cable

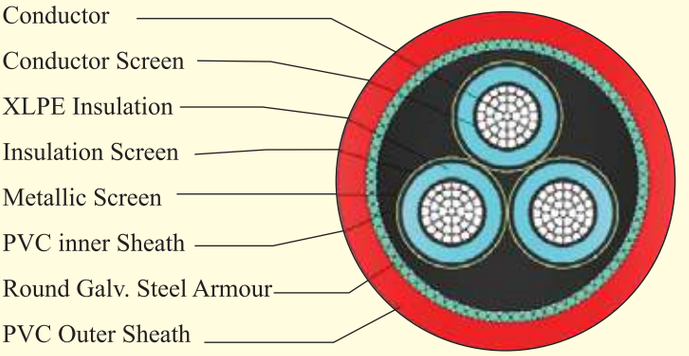
RATED VOLTAGE
U_o/U (U_m):):18/30 (36) kv
Permissible Service Voltage: 19/33 kv

APPLICATION

Can be used in Cable ducts or tray or underground in Power switching station, in industrial plants, in commercial buildings and local distribution systems.

FEATURES

Max Operating Temp. 90ºC
Max Short Circuit Temp. 250ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
A.C Test Voltage: 63 kv
Flame Retardant as per IEC 60332



REFERENCE STANDARD

IEC 60502-2

CONSTRUCTION

Conductor: Plain annealed Compacted Stranded circular Copper/ Aluminum, Class-2 as per IEC 60228

Conductor Screen: Semicon

Insulation: Cross-linked Polyethylene (XLPE) temperature rating 90ºC as per IEC 60502-2

Insulation Screen: Semicon

Metallic Screen: Copper Tape

Inner Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

Armour: Round Galvanized Steel Wire as per IEC 60502-2

Binder (optional): Galvanized Steel Tape

Outer Sheath: Poly vinyl Chloride (PVC) ST-2 temperature rating 90ºC as per IEC 60502-2

FR & FRLS Sheath available on request.

COLOR

Insulation: Natural (Red, Yellow & Blue strip for core marking)

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA									
Nominal cross sectional area of conductor	Nominal thickness of Insulation	Nominal Diameter of Round steel Armour	Nominal thickness of Sheath	Approx. overall diameter of cable	Approx. Weight of Cable		Max. D.C Resistance of Conductor at 20°C		Approx. Capacitance of Cable	Approx. Inductance of Cable	Current rating at 20°C in ground				Current rating at 30°C in air	
											In a buried direct		In a buried duct		Laid in direct in flat touching	
					Cu	Al	Cu	Al			Cu	Al	Cu	Al	Cu	Al
core x mm^2	mm	mm	mm	mm	kg/km	kg/km	Ω/km	Ω/km	Microf/km	mH/km	amps	amps	amps	amps	amps	amps
3 x 50	8.0	2.5	3.3	81.8	9500	8650	0.387	0.641	0.138	0.448	181	140	158	123	205	159
3 x 70	8.0	3.15	3.4	86.9	11700	10420	0.268	0.443	0.154	0.423	220	171	194	150	253	196
3 x 95	8.0	3.15	3.5	91.0	13200	11380	0.193	0.320	0.169	0.401	263	204	232	180	307	238
3 x 120	8.0	3.15	3.6	94.4	14200	11870	0.153	0.253	0.183	0.384	298	232	264	206	352	274
3 x 150	8.0	3.15	3.7	97.8	15580	12800	0.124	0.206	0.194	0.371	332	259	296	231	397	309
3 x 185	8.0	3.15	3.9	102.0	17480	13950	0.0991	0.164	0.210	0.358	374	293	335	262	453	354
3 x 240	8.0	3.15	4.0	106.6	19900	15320	0.0754	0.125	0.229	0.343	431	338	387	304	529	415
3 x 300	8.0	3.15	4.2	113.2	22800	17450	0.0601	0.100	0.249	0.330	482	380	435	343	599	472

Instrument (Overall Shielded)

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & PVC Sheathed Multi Pair Overall Shielded Cable

APPLICATION

These cables are designed for use in communication and instrumentation applications in and around process industries. Also used for the interconnection of electrical equipment and instruments in hazardous areas like petrochemical plants and thermal power plants.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 5308-2, IEC 60332

CONSTRUCTION

Conductor: Plain annealed Stranded/ Flexible Circular Copper, Class-2 & 5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

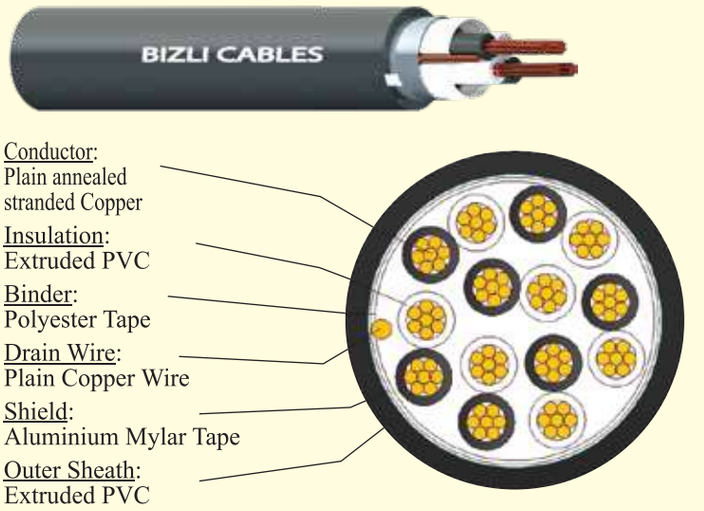
Pair: Two core twisted together with suitable lay

Binder: Polyester Tape

Shield: Aluminium Mylar Tape followed by Plain/ Tinned annealed copper Drain wire

Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.



COLOR

Insulation: Pair color with continuous number print or Color chart as per BS 5308-2

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA
No. of pairs & cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Overall diameter of Cable	Approx weight of Cable	Max. DC resistance of conductor at 20°C
Pair x mm ^{2}	no./mm	mm	mm	mm	kg/km	Ω/km
1Px0.5 rm	16/0.2	0.6	0.8	6.2	60	39.0
2Px0.5 rm	16/0.2	0.6	0.8	7.6	80	39.0
5Px0.5 rm	16/0.2	0.6	1.1	12.4	200	39.0
10Px0.5 rm	16/0.2	0.6	1.2	16.5	340	39.0
15Px0.5 rm	16/0.2	0.6	1.3	19.2	480	39.0
1Px0.75 rm	24/0.2	0.6	0.8	6.7	75	26.0
2Px0.75 rm	24/0.2	0.6	0.8	8.2	100	26.0
5Px0.75 rm	24/0.2	0.6	1.2	13.8	250	26.0
10Px0.75 rm	24/0.2	0.6	1.3	18.4	450	26.0
15Px0.75 rm	24/0.2	0.6	1.3	21.2	600	26.0
1Px1.5 rm	7/0.52	0.6	0.8	7.5	100	12.1
2Px1.5 rm	7/0.52	0.6	0.9	9.3	150	12.1
5Px1.5 rm	7/0.52	0.6	1.2	15.6	360	12.1
10Px1.5 rm	7/0.52	0.6	1.3	20.9	670	12.1
15Px1.5 rm	7/0.52	0.6	1.5	24.6	970	12.1

Telephone Cable

PE Insulated PVC Sheathed Multi Pair Telecommunication Cable

APPLICATION

Suitable for telecommunication and signal circuits. They are suitable for expose or concealed conduit installation permissible voltage 200 V.

FEATURES

Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

VDE 0815

CONSTRUCTION

Conductor: Plain annealed Solid Copper as per ASTM B3

Insulation: Polyethylene (PE)
Assembly: Two cores twisted together to form a pair, Pairs assembled together depending on the cable construction.
Binder: Polyester tape
Sheath: Poly vinyl Chloride (PVC)
FR & FRLS Sheath available on request.

COLOR

Insulation: Individual Pair color
Sheath: Grey

Number of core	Nominal cross sectional area	No. of strand & dia of wire	Nominal Thickness of insulation	Nominal Thickness of sheath	Approximate overall diameter	Approximate weight
Pair (core)	mm²	nos./mm	mm	mm	mm	kg/km
1 Pair (2 core)	0.125	1/0.4	0.2	0.8	4.2	20.0
2 Pair (4 core)	0.125	1/0.4	0.2	0.8	4.3	24.0
3 Pair (6 core)	0.125	1/0.4	0.2	1.0	5.0	35.0
4 Pair (8 core)	0.125	1/0.4	0.2	1.2	6.5	45.0
5 Pair (10 core)	0.125	1/0.4	0.2	1.2	7.1	55.0
6 Pair (12 core)	0.125	1/0.4	0.2	1.4	7.7	70.0
7 Pair (14 core)	0.125	1/0.4	0.2	1.4	8.1	78.0
8 Pair (1 6 core)	0.125	1/0.4	0.2	1.4	8.3	82.0
10 Pair (20 core)	0.125	1/0.4	0.2	1.4	9.5	103.0
15 Pair (30 core)	0.125	1/0.4	0.2	1.4	11.5	140.0
20 Pair (40 core)	0.125	1/0.4	0.2	1.6	13.4	180.0
30 Pair (60 core)	0.125	1/0.4	0.2	1.6	15.0	240.0
1 Pair (2 core)	0.282	1/0.6	0.2	0.8	4.2	23.0
2 Pair (4 core)	0.282	1/0.6	0.2	0.8	4.5	30.0
3 Pair (6 core)	0.282	1/0.6	0.2	1.0	5.5	44.0
4 Pair (8 core)	0.282	1/0.6	0.2	1.2	6.6	68.0
5 Pair (10 core)	0.282	1/0.6	0.2	1.2	7.2	75.0
6 Pair (12 core)	0.282	1/0.6	0.2	1.4	8.0	90.0
7 Pair (14 core)	0.282	1/0.6	0.2	1.4	8.5	100.0
8 Pair (16 core)	0.282	1/0.6	0.2	1.4	9.0	106.0
10 Pair (20 core)	0.282	1/0.6	0.2	1.4	10.0	136.0
15 Pair (30 core)	0.282	1/0.6	0.2	1.4	12.5	200.0
20 Pair (40 core)	0.282	1/0.6	0.2	1.6	14.2	260.0
30 Pair (60 core)	0.282	1/0.6	0.2	1.6	16.8	360.0
50 Pair (100 core)	0.282	1/0.6	0.2	1.6	20.0	530.0
100 Pair (200 core)	0.282	1/0.6	0.2	1.6	27.0	940.0

Jumper Wire

Polyethylene (PE) Insulated Twisted Cores

RATED VOLTAGE: 200V

APPLICATION

These cables are designed for use of extending telephone circuits to subscriber premises by means of aerial drop from distribution lines.

FEATURES

Excellent Mechanical & Electrical properties
Lead Free Environment Friendly
Resistance to Solar Radiation

REFERENCE STANDARD

ITS S/WJ-1D1C

CONSTRUCTION

Conductor: Plain Annealed Flexible Copper, Class-5 as per IEC 60228

Insulation: Polyethylene (PE)
Multi cores twisted together uniformly.

PHYSICAL DATA					
No. of core (pair)	Nominal cross sectional area	No. of strand & dia of wire	Nominal Thickness of insulation	Approx. overall diameter	Approx. weight
	mm^2	nos./mm	mm	mm	kg/km
2 core (1 pair)	0.123	9/0.132	0.2	2.3	6
4 core (2 pair)	0.123	9/0.132	0.2	2.8	12
6 core (3 pair)	0.123	9/0.132	0.2	3.5	18
8 core (4 pair)	0.123	9/0.132	0.2	3.65	24
10 core (5 pair)	0.123	9/0.132	0.2	4.00	30

Drop Wire

Polyethylene (PE) / PVC Insulated Two wire Flat Telephone Cable

RATED VOLTAGE: 200V

APPLICATION

These cables are designed for use of extending telephone circuits to subscriber premises by means of aerial drop from distribution lines.

FEATURES

Excellent Mechanical & Electrical properties
Lead Free Environment Friendly
Resistance to Solar Radiation

REFERENCE STANDARD

ITS S/WJ-1D1C

CONSTRUCTION

Conductor: Hard Drawn Solid Copper as per ASTM B1

Insulation: Polyethylene (PE) / Poly vinyl chloride (PVC)
Two wires placed in parallel (Flat) construction

COLOR

Insulation: Black

PE INSULATED DROP WIRE

PHYSICAL DATA				
No. of core (pair)	No. of strand & dia of wire	Nominal Thickness of insulation	Approx. overall diameter	Approx. weight
	nos./mm	mm	mm	kg/km
2 core (1 pair)	1/0.60	0.787	4.11x2.31	12
2 core (1pair)	1/0.90	1.05	6.3x3.0	25

PVC INSULATED DROP WIRE

PHYSICAL DATA				
No. of core (pair)	No. of strand & dia of wire	Nominal Thickness of insulation	Approx. overall diameter	Approx. weight
	nos./mm	mm	mm	kg/km
2 core (1 pair)	1/0.60	0.787	4.11x2.31	19
2 core (1pair)	1/0.90	1.05	6.3x3.0	31.5

Co-Axial Cable

LDPE Insulated PVC Sheathed CU Braided Cable

APPLICATION

These cables are used in high frequency transmission, especially for transmitters and receivers, computers, radio and TV transmissions. The varied mechanical, thermal and electronic properties of Coaxial cables mean that they can be used in different MHz levels, as per cable type.

FEATURES

Larger Expanded network with Higher Bandwidth
Cu Screening ensure low loss of signal quality
Low attenuation & Minimum structural return loss
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

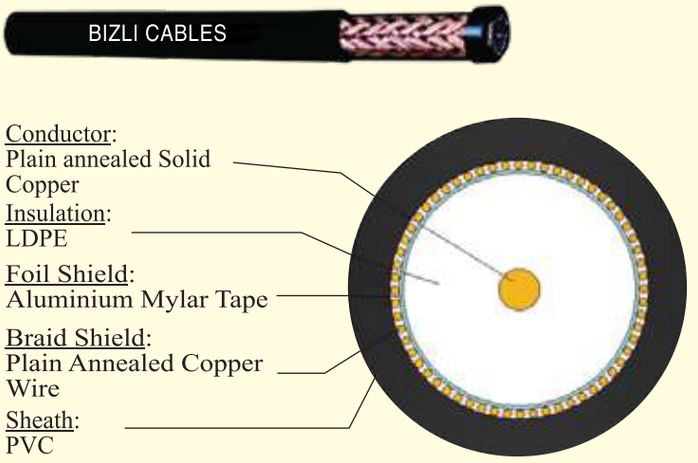
REFERENCE STANDARD

MIL-C-17

CONSTRUCTION

Conductor: Plain annealed Solid Copper as per ASTM B3

Insulation: Low Density Polyethylene (LDPE)
Foil Shield: Aluminium Mylar Tape



Braid Shield: Plain Annealed Copper wire
Sheath: Poly vinyl Chloride (PVC)
FR & FRLS Sheath available on request.

COLOR

Insulation: Natural
Sheath: Black

PE INSULATED PVC SHEATHED CO-AXIAL CABLES

Code No.	Nominal cross sectional area of conductor	No. of strand & diameter of wire	Approx Diameter over dielectric insulation	screen type	Thickness of Sheath	Approx Overall diameter	Impedence	Approximate weight
	mm^2	nos./mm	mm		mm	mm	ohm	kg/km
3/C	0.2	1/0.5	3.00	PAC	0.9	5.40	75	33
4/C	0.42	1/0.73	3.81	PAC	1.0	6.35	75	50
5/C	0.64	1/0.90	4.20	PAC	1.2	7.20	75	60
RG-59/U	0.52	1/0.81	3.68	Al.Mylar+PAC	1.0	6.15	75	56
RG-6/U	0.82	1/1.02	4.30	Al.Mylar+PAC	1.2	7.50	75	69
6/C	1.23	1/1.25	5.46	PAC	1.2	8.20	75	80
RG-11/U	2.09	1/1.63	6.65	Al.Mylar+PAC	1.2	9.80	75	110

LAN Cable

HDPE Insulated PVC Sheathed 4 Pair UTP Cable

APPLICATION

This cable is used for high speed transmission of data in computer network systems designed for characteristics of up to 100 MHz for CAT 5 and 200 MHz for CAT 6.

FEATURES

Low attenuation, low crosstalk & low structural return loss
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

EIA/TIA 568, ISO IEC 11801 & BS EN 50288-3-1

CONSTRUCTION

Conductor: Plain annealed Solid Copper as per ASTM B3

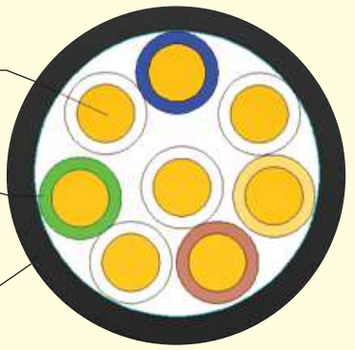
Insulation: High Density Polyethylene (HDPE)

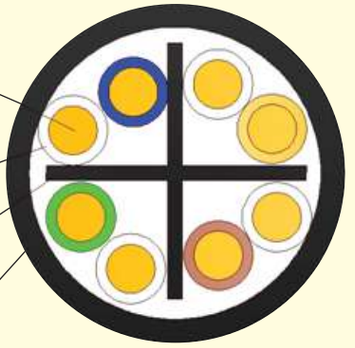
Pair: Two cores twisted together (Each pair with varying lay lengths)

Cross Separator (for CAT 6): Polyethylene (PE) (to reduce cross talk)

Sheath: Poly vinyl Chloride (PVC)

FR & FRLS Sheath available on request.





COLOR

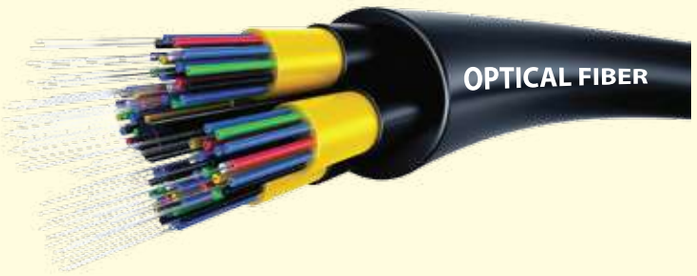
Insulation: White-Blue, White-Orange, White-Brown, White-Green
Sheath: Grey or Blue

PHYSICAL DATA							
Type	**No. of Pair X Size**	**No. & dia. of wire**	**Approx. Core dia.**	**Nominal Sheath thickness**	**Approx. Overall dia.**	**Approx. Weight**	**Standard Packing Length**
	No. X AWG	No./mm	mm	mm	mm	Kg/km	mtrs
CAT 5	4X2X24 AWG	1/0.50	0.90	0.6	5.0	30.0	305
CAT 6	4X2X23 AWG	1/0.57	0.98	0.6	6.0	40.0	305

TECHNICAL DATA		
	CAT 5	CAT 6
Characteristic Impedance (ohm)	100±15	100±15
Frequency (MHz)	1-100	1-2500
Mutual Capacitance (pF/m)	49.2	48
Conductor Resistance (ohm/km)	84.2	71.02
Dielectric Strength	500 V for 1 minute	
Min Insulation Resistance (M.ohm.km)	500	

What is fiber optic cable ?

A fiber optic cable , also known as an optical fiber cable , is an assembly similar to an electrical cable , but containing one or more optical fibers that are used to carry a light ,light wave are propagation as like as electromagnetic wave.



There are three parts of optical fiber,

1)core 2)cladding and 3)coating

There are three types of optical fiber:

1)Single mode optical fiber

2)Multimode optical fiber and

3)Graded index multimode optical fiber

At present single mode optical fiber are used in whole world

Due to single mode optical fiber loss is very poor.

Features:

1 Optical Fiber Cable's carry signals
2 Data transmission rate is very high
3 Easily and rapidly data transmitted over long distance
4 No physical electrical connection is required between the secondary and receiver
5 Greater repeater spacing
6 The cost per channel is the lowest.

Advantage:

1 Low attenuation
2 Greater bandwidth
3 Low transmission loss
4 Dielectric waveguide
5 Electromagnetic isolation
6 Immunity to interference and cross talk
7 Potential low cost
8 Small size and weight
9 Signal security

Application:

Communication sector (like as Dish Line connection, Internet), Medical Industry, Mechanical inspections, lighting and decorations, Automotive Industry, Industries, Broadcasting.

THE MEANING OF THE SYMBOLS FOR FIBRE OPTIC CABLES

SLT	SINGLE LOOSE TUBE
MLT	MULTI LOOSE TUBE CABLES
SA	CORRUGATED STEEL TAPE
NMA	NON METALLIC STRENGHT MEMBER
DA	DOUBLE ARMOUR TWO LAYERS OF GALVANIZED STEEL TAPE
SJ	SINGLE JACKET (SHEATH)
DJ	DOUBLE JACKET (SHEATH)
-A	AERIAL CABLE
-P	FIBER OPTIC + POWER HYBRID CABLE
LSZH	LOW SMOKE ZERO HALOGEN SHEATH
ADSS	ALL DIELECTRIC SELF SUPPORTING CABLE
DIN VDE 0888	OPTICAL FIBERCABLES STANDARD
A -	OUTDOOR CABLE
B	ARMOURING
(BN)	GLASS YARN NON METALLIC ARMOURING FOR RODENT PROTECTION
D	LOOSE BUFFER TUBE, FILLED GLASS YARN NON METALLIC ARMOURING FOR RODENT PROTECTION
E	SINGLE MODE FIBER
F	FILLING COMPOUND IN THE CABLE CORE
G	MULTI MODE FIBER
J-	INDOOR CABLE
(L)	LAMINATED ALUMINIUM PE TAPE
Q	WATER SWELLABLE MATERIAL IN THE CABLE CORE (DRY CORE)
(SR)	ARMOURING BY LAMINATED, CORRUGATED, LONGITUDINAL, OVERLAPPED STEEL TAPE
Y	POLYVINYL CHLORIDE JACKET (SHEATH)
2Y	POLYETHYLENE JACKET (SHEATH)
(ZN)	NON - METALLIC ANTI - BUCKLING ANG STRENGHT MEMBERS

Loose Tube with FRP Strength Member and Black HDPE Sheathed Cable

Type A-D(..ZN)2Y-Outdoor

Abbreviation:

A-Outdoor Cable

D-Loose Tube

(..ZN)-2x-Non-Metallic Yarn Reinforcement (FRP)

2Y- PE Sheathed

Reference Standard:

YD/T 769-2003, IEC 60793-2-50

Construction:

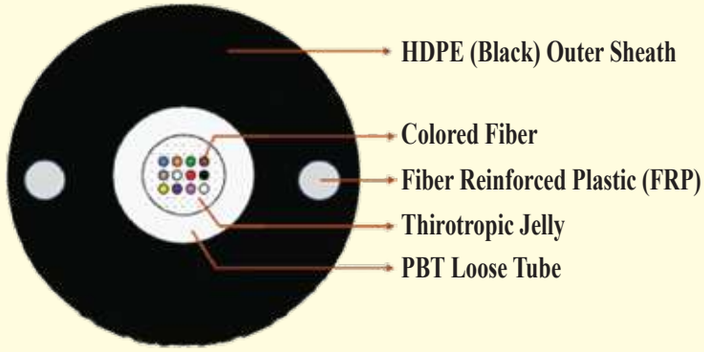
The fibers-250µm has positioned in a loose tube made of PBT which is a high modulus plastic. The loose tubes has filled with Thixotropic Jelly which act as a water resistant filling compound. Two parallel fiber reinforced plastics (FRP) has placed at the two sides. The cable is completed with a polyethylene (PE) –HDPE sheath.

Special tube filling compound ensure a critical protection of fiber.

Non-metal strength member has an excellent anti electro-magnet ability.

PE sheath protects cable from ultraviolet radiation.

CROSS SECTION DIAGRAM - Not to Soale



Cable construction Details

No of fibers in Tube	Fibers per Tube
Fiber Identification	Blue, Orange, Green, Brown, Gray, White, Red, Black, Yellow, Violet, Pink & Natural / Aqua
Loose Tube	PBT Loose Tube Filled With Thixotropic Jelly
Tube Identification	Natural color
Strength Member	Two Force Reinforced Plastic Embedded in Sheath
Outer Sheath	High Density Polyethylene - Black Color

CHARACTERISTICS OF FIBER:

Composition	
Core	Germanium doped silica
Cladding	Silica, step index and matched clad type
Coating	Dual layers of UV-cured acrylate

Geometrical Characteristics	
Mode field diameter	9.2 ± 0.4 µm at 1310 nm
	10.4 ± 0.5 µm at 1550 nm
Cladding diameter	125.0 ± 0.7 µm
Core/cladding concentricity error	≤ 0.5 µm
Cladding non-circularity	≤ 0.7 %
Fiber curl radius	≥ 4 m
Primary coating diameter (for uncolored fiber)	242 ± 5 µm
Primary coating diameter (for colored fiber)	250 ± 10 µm
Coating/cladding concentricity error	≤ 12 µm

Optical Characteristics	
Attenuation-at 1310 nm	≤ 0.334 dB/km
Attenuation-at 1550 nm	≤ 0.194 dB/km
Attenuation Change at 1285 ~ 1330 nm	≤ 0.03 dB/km (1310 nm reference)
Attenuation Change at 1525 ~ 1575 nm	≤ 0.02 dB/km (1550 nm reference)
Point discontinuity at 1310 nm and 1550 nm	≤ 0.05 dB
Zero dispersion wavelength	1302 ~ 1322 nm
Zero dispersion slope	≤ 0.090 ps/(nm^2•km)
Chromatic dispersion at 1285 ~ 1330 nm	≤ 3.5 ps/(nm• km)
Chromatic dispersion at 1550 nm	≤ 18 ps/(nm• km)
Cable cut-off wavelength (λcc)	≤ 1260 nm
PMD for individual value (uncabled fiber)	≤ 0.15 ps/√km
For link value	≤ 0.1 ps/√km

Characteristic of FRP		
Properties	Unit	Specification
Glass Content	%	82 ± 3
Diameter Stability	Mm	± 0.05
Ovality	Mm	< 0.05
Tensile Strength	Mpa	≥ 1400
Tensile Modulus	Mpa	≥ 50000
Elongation at Break	%	≥ 2.5
Min. Bending Radius at 25°c	Mm	≤25xDiameter of Rod
EAA Coating Thickness	Microns	40±2

Identification Color For Fiber Number	
Fiber No.	Fiber Color
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Pink
12	Turquoise


INSTRUMENTATION CABLE

Flexible Control

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & PVC Sheathed Multi Core Flexible Control Cable

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 1.5-2.0 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60227-7

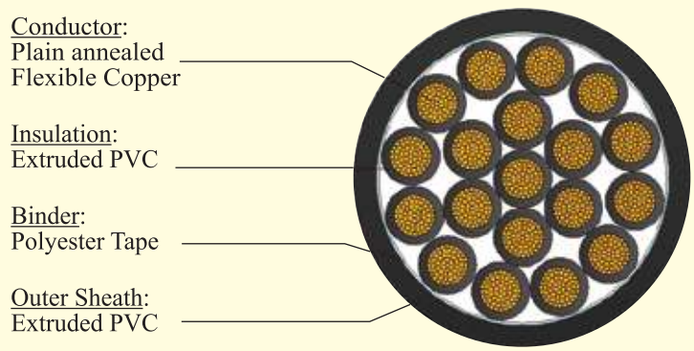
CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) temperature rating 70ºC as per IEC 60227-1

Binder: Polyester tape

Sheath: Poly vinyl Chloride (PVC) temperature rating 70ºC as per IEC 60227-1
FR & FRLS Sheath available on request.



COLOR

Insulation :

X= Black with continuous number print

G= Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA							ELECTRICAL DATA	
Number of core & Nominal cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. Overall diameter		Approx weight of Cable	Max. DC resistance of conductor at 20°C	Current Carrying Capacity in air at 35°C ambient temp
				Lower limit	Upper limit			
core x mm^2	nos./mm	mm	mm	mm	mm	kg/km	Ω/km	amps
2 x 0.5 rm	16/0.2	0.6	0.7	5.2	6.6	46	39.0	7
3 x 0.5 rm	16.0.2	0.6	0.7	5.5	7.0	53	39.0	7
5 x 0.5 rm	16/0.2	0.6	0.8	6.8	8.6	80	39.0	5
7 x 0.5 rm	16/0.2	0.6	0.9	8.3	10.4	100	39.0	4
12 x 0.5 rm	16/0.2	0.6	1.1	10.4	12.9	170	39.0	4
18 x 0.5 rm	16/0.2	0.6	1.2	12.3	15.3	240	39.0	3
36 x 0.5 rm	16/0.2	0.6	1.5	17.0	20.9	470	39.0	2
48 x 0.5 rm	16/0.2	0.6	1.7	19.8	24.3	610	39.0	2
2 x 0.75 rm	24/0.2	0.6	0.8	5.7	7.2	58	26.0	11
3 x 0.75 rm	24/0.2	0.6	0.8	6.0	7.6	69	26.0	11
5 x 0.75 rm	24/0.2	0.6	0.9	7.4	9.3	100	26.0	8
7 x 0.75 rm	24/0.2	0.6	1.0	9.0	11.3	125	26.0	7
12 x 0.75 rm	24/0.2	0.6	1.1	11.0	13.7	212	26.0	5
18 x 0.75 rm	24/0.2	0.6	1.3	13.2	16.4	315	26.0	4
36 x 0.75 rm	24/0.2	0.6	1.6	18.2	22.4	598	26.0	3
48 x 0.75 rm	24/0.2	0.6	1.8	21.2	25.9	790	26.0	3

PHYSICAL DATA							ELECTRICAL DATA	
Number of core & Nominal cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx. Overall diameter		Approx weight of Cable	Max. DC resistance of conductor at 20°C	Current Carrying Capacity in air at 35°C ambient temp
				Lower limit	Upper limit			
core x mm^2	no./mm	mm	mm	mm	mm	kg/km	Ω/km	amps
2 x 1.0 rm	32/0.2	0.6	0.8	5.9	7.5	64	19.5	14
3 x 1.0 rm	32/0.2	0.6	0.8	6.3	8.0	77	19.5	14
5 x 1.0 rm	32/0.2	0.6	0.9	7.8	9.8	115	19.5	11
7 x 1.0 rm	32/0.2	0.6	1.0	9.5	11.8	148	19.5	9
12 x 1.0 rm	32/0.2	0.6	1.2	11.8	14.6	252	19.5	8
18 x 1.0 rm	32/0.2	0.6	1.3	14.0	17.2	360	19.5	6
36 x 1.0 rm	32/0.2	0.6	1.7	19.4	23.8	715	19.5	5
48 x 1.0 rm	32/0.2	0.6	1.9	22.5	27.6	940	19.5	5
2 x 1.5 rm	30/0.25	0.7	0.8	6.8	8.6	85	13.3	17
3 x 1.5 rm	30/0.25	0.7	0.9	7.4	9.4	106	13.3	17
5 x 1.5 rm	30/0.25	0.7	1.0	9.1	11.4	160	13.3	13
7 x 1.5 rm	30/0.25	0.7	1.2	11.3	14.1	210	13.3	11
12 x 1.5 rm	30/0.25	0.7	1.3	13.8	17.0	352	13.3	9
18 x 1.5 rm	30/0.25	0.7	1.5	16.5	20.3	520	13.3	8
36 x 1.5 rm	30/0.25	0.7	2.0	23.0	28.2	1020	13.3	6
48 x 1.5 rm	30/0.25	0.7	2.2	26.2	32.5	1340	13.3	6
2 x 2.5 rm	50/0.25	0.8	0.9	8.2	10.3	125	7.98	24
3 x 2.5 rm	50/0.25	0.8	1.0	9.0	11.2	165	7.98	24
5 x 2.5 rm	50/0.25	0.8	1.1	11.0	13.7	244	7.98	18
7 x 2.5 rm	50/0.25	0.8	1.3	13.6	16.8	320	7.98	16
12 x 2.5 rm	50/0.25	0.8	1.5	16.8	20.6	550	7.98	13
18 x 2.5 rm	50/0.25	0.8	1.8	20.2	24.8	820	7.98	11
36 x 2.5 rm	50/0.25	0.8	2.3	28.0	34.2	1580	7.98	8
48 x 2.5 rm	50/0.25	0.8	2.4	32.1	39.1	2010	7.98	8

Flexible Shield (CU Braided)

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & PVC Sheathed Multi Core Flexible Braided Cable

APPLICATION

For use in control circuits, actuating industrial equipment, control panel, in light, ordinary or heavy duty industry where power distribution device is needed to transmit control signals or measure signal operations.

FEATURES

Max Operating Temp. 70ºC
Max Short Circuit Temp. 160ºC
Lead Free Environment Friendly
Good withstanding capacity to high voltage and current.
Excellent Mechanical & Electrical properties
AC Test voltage 1.5-2.0 KV
Flame Retardant as per IEC 60332

REFERENCE STANDARD

IEC 60227-7

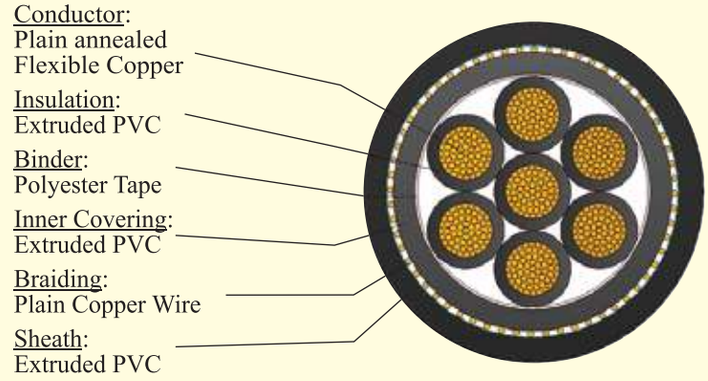
CONSTRUCTION

Conductor: Plain annealed Flexible circular Copper, Class-5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC) temperature rating 70ºC as per IEC 60227-1

Binder: Polyester tape

Inner Sheath: Poly vinyl Chloride (PVC) temperature rating 70ºC as per IEC 60227-1



Shield: Plain Annealed Copper wire Braided

Outer Sheath: Poly vinyl Chloride (PVC) temperature rating 70ºC as per IEC 60227-1

FR & FRLS Sheath available on request.

COLOR

Insulation :

X= Black with continuous number print

G= Black with continuous number print including one core Green/yellow bi-color

Sheath: Black

PHYSICAL DATA								ELECTRICAL DATA	
Number of core & Nominal cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Diameter of braided wire	Nominal thickness of sheath	Approx. Overall diameter		Approx weight of Cable	Max. DC resistance of conductor at 20°C	Current Carrying Capacity in air at 35°C ambient temp
					Lower limit	Upper limit			
core x mm²	no./mm	mm	mm	mm	mm	mm	kg/km	Ω/km	amps
2 x 0.5rm	16/0.2	0.6	0.15	0.9	7.7	9.6	96	39.0	7
3 x 0.5 rm	16/0.2	0.6	0.15	0.9	8.0	10.0	105	39.0	7
5 x 0.5 rm	16/0.2	0.6	0.15	1.0	9.3	11.6	142	39.0	5
7 x 0.5 rm	16/0.2	0.6	0.15	1.1	10.8	13.6	165	39.0	4
12 x 0.5 rm	16/0.2	0.6	0.2	1.3	13.3	16.5	288	39.0	4
18 x 0.5 rm	16/0.2	0.6	0.2	1.3	15.1	18.6	375	39.0	3
2 x 0.75 rm	24/0.2	0.6	0.15	0.9	8.0	10.0	101	26.0	11
3 x 0.75 rm	24/0.2	0.6	0.15	0.9	8.3	10.4	118	26.0	11
5 x 0.75 rm	24/0.2	0.6	0.15	1.0	9.7	12.1	160	26.0	8
7 x 0.75 rm	24/0.2	0.6	0.15	1.2	11.5	14.3	208	26.0	7
12 x 0.75 rm	24/0.2	0.6	0.2	1.3	13.9	17.2	332	26.0	5
18 x 0.75 rm	24/0.2	0.6	0.2	1.5	16.2	19.9	468	26.0	4
2 x 1.0 rm	32/0.2	0.6	0.15	0.9	8.2	10.3	116	19.5	14
3 x 1.0 rm	32/0.2	0.6	0.15	1.0	8.8	11.0	136	19.5	14
5 x 1.0 rm	32/0.2	0.6	0.15	1.1	10.3	12.8	184	19.5	11
7 x 1.0 rm	32/0.2	0.6	0.15	1.2	12.2	15.1	238	19.5	9
12 x 1.0 rm	32/0.2	0.6	0.2	1.4	14.7	18.1	388	19.5	8
18 x 1.0 rm	32/0.2	0.6	0.2	1.5	16.9	20.8	535	19.5	6
2 x 1.5 rm	30/0.25	0.7	0.15	1.0	9.3	11.6	148	13.3	17
3 x 1.5 rm	30/0.25	0.7	0.15	1.0	9.7	12.1	170	13.3	17
5 x 1.5 rm	30/0.25	0.7	0.15	1.2	11.8	14.7	255	13.3	13
7 x 1.5 rm	30/0.25	0.7	0.2	1.3	14.1	17.4	326	13.3	11
12 x 1.5 rm	30/0.25	0.7	0.2	1.5	16.7	20.5	510	13.3	9
18 x 1.5 rm	30/0.25	0.7	0.2	1.7	19.6	24.1	720	13.3	8
2 x 2.5 rm	50/0.25	0.8	0.15	1.1	10.7	13.3	196	7.98	24
3 x 2.5 rm	50/0.25	0.8	0.15	1.1	11.3	14.0	235	7.98	24
5 x 2.5 rm	50/0.25	0.8	0.2	1.3	13.9	17.2	370	7.98	18
7 x 2.5 rm	50/0.25	0.8	0.2	1.5	16.5	20.3	460	7.98	16
12 x 2.5 rm	50/0.25	0.8	0.2	1.7	19.9	24.4	745	7.98	13
18 x 2.5 rm	50/0.25	0.8	0.2	2.0	23.3	23.5	1060	7.98	11

Instrument (Overall Shielded)

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & PVC Sheathed Multi Core Overall Shielded Cable

APPLICATION

These cables are designed for use in communication and instrumentation applications in and around process industries. Also used for the interconnection of electrical equipment and instruments in hazardous areas like petrochemical plants and thermal power plants.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 5308-2, IEC 60332

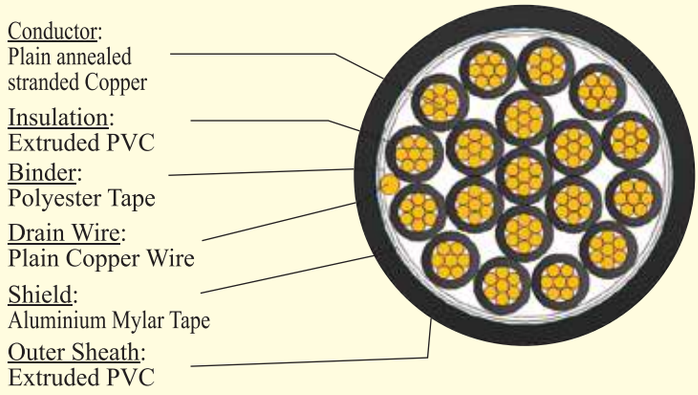
CONSTRUCTION

Conductor: Plain annealed Stranded/ Flexible Circular Copper, Class-2 & 5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Binder: Polyester Tape

Shield: Aluminium Mylar Tape followed by Plain/ Tinned annealed copper Drain wire



Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Black with continuous number print

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA
No. of core & cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Overall diameter of Cable	Approx weight of Cable	Max. DC resistance of conductor at 20°C
Core x mm^2	no./mm	mm	mm	mm	kg/km	Ω/km
2Cx0.5 rm	16/0.2	0.6	0.8	6.25	55	39.0
3Cx0.5 rm	16/0.2	0.6	0.8	6.6	70	39.0
4Cx0.5 rm	16/0.2	0.6	0.8	7.2	78	39.0
6Cx0.5 rm	16/0.2	0.6	0.9	8.6	110	39.0
10Cx0.5 rm	16/0.2	0.6	1.1	11.2	180	39.0
20Cx0.5 rm	16/0.2	0.6	1.2	14.3	310	39.0
2Cx0.75 rm	24/0.2	0.6	0.8	6.7	67	26.0
3Cx0.75 rm	24/0.2	0.6	0.8	7.2	83	26.0
4Cx0.75 rm	24/0.2	0.6	0.8	7.8	100	26.0
6Cx0.75 rm	24/0.2	0.6	0.9	9.4	140	26.0
10Cx0.75 rm	24/0.2	0.6	1.1	12.2	220	26.0
20Cx0.75 rm	24/0.2	0.6	1.2	15.7	380	26.0
2Cx1.5 rm	7/0.52	0.6	0.8	8.0	100	12.1
3Cx1.5 rm	7/0.52	0.6	0.9	8.6	130	12.1
4Cx1.5 rm	7/0.52	0.6	0.9	9.5	150	12.1
6Cx1.5 rm	7/0.52	0.6	1.1	11.5	210	12.1
10Cx1.5 rm	7/0.52	0.6	1.2	15.0	330	12.1
20Cx1.5 rm	7/0.52	0.6	1.3	19.0	580	12.1

Instrument (Overall Shielded)

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & PVC Sheathed Multi Pair Overall Shielded Cable

APPLICATION

These cables are designed for use in communication and instrumentation applications in and around process industries. Also used for the interconnection of electrical equipment and instruments in hazardous areas like petrochemical plants and thermal power plants.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 5308-2, IEC 60332

CONSTRUCTION

Conductor: Plain annealed Stranded/ Flexible Circular Copper, Class-2 & 5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

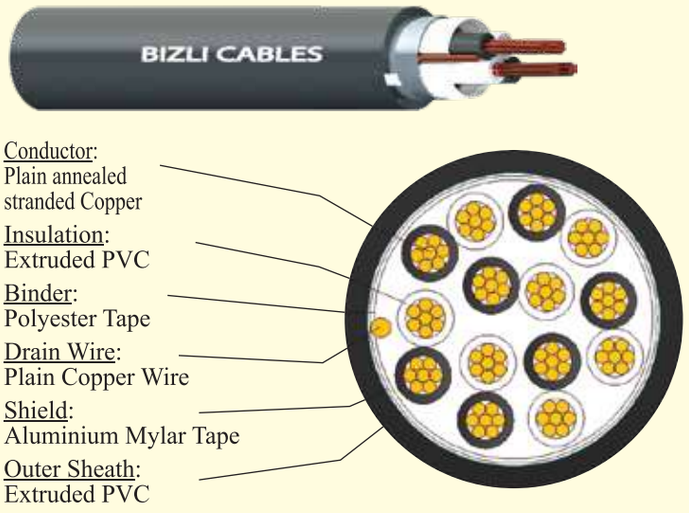
Pair: Two core twisted together with suitable lay

Binder: Polyester Tape

Shield: Aluminium Mylar Tape followed by Plain/ Tinned annealed copper Drain wire

Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.



COLOR

Insulation: Pair color with continuous number print or Color chart as per BS 5308-2

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA
No. of pairs & cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Overall diameter of Cable	Approx weight of Cable	Max. DC resistance of conductor at 20°C
Pair x mm ^{2}	no./mm	mm	mm	mm	kg/km	Ω/km
1Px0.5 rm	16/0.2	0.6	0.8	6.2	60	39.0
2Px0.5 rm	16/0.2	0.6	0.8	7.6	80	39.0
5Px0.5 rm	16/0.2	0.6	1.1	12.4	200	39.0
10Px0.5 rm	16/0.2	0.6	1.2	16.5	340	39.0
15Px0.5 rm	16/0.2	0.6	1.3	19.2	480	39.0
1Px0.75 rm	24/0.2	0.6	0.8	6.7	75	26.0
2Px0.75 rm	24/0.2	0.6	0.8	8.2	100	26.0
5Px0.75 rm	24/0.2	0.6	1.2	13.8	250	26.0
10Px0.75 rm	24/0.2	0.6	1.3	18.4	450	26.0
15Px0.75 rm	24/0.2	0.6	1.3	21.2	600	26.0
1Px1.5 rm	7/0.52	0.6	0.8	7.5	100	12.1
2Px1.5 rm	7/0.52	0.6	0.9	9.3	150	12.1
5Px1.5 rm	7/0.52	0.6	1.2	15.6	360	12.1
10Px1.5 rm	7/0.52	0.6	1.3	20.9	670	12.1
15Px1.5 rm	7/0.52	0.6	1.5	24.6	970	12.1

Instrument (Individual & Overall Shielded)

RATED VOLTAGE
U_o/U: 300/500 V

PVC Insulated & Sheathed Multi Pair Individual & Overall Shielded Cable

APPLICATION

These cables are designed for use in communication and instrumentation applications in and around process industries. Also used for the interconnection of electrical equipment and instruments in hazardous areas like petrochemical plants and thermal power plants.

FEATURES

Maximum Operating Temperature 70ºC
Maximum Short Circuit Temperature 160ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332

REFERENCE STANDARD

BS 5308-2, IEC 60332

CONSTRUCTION

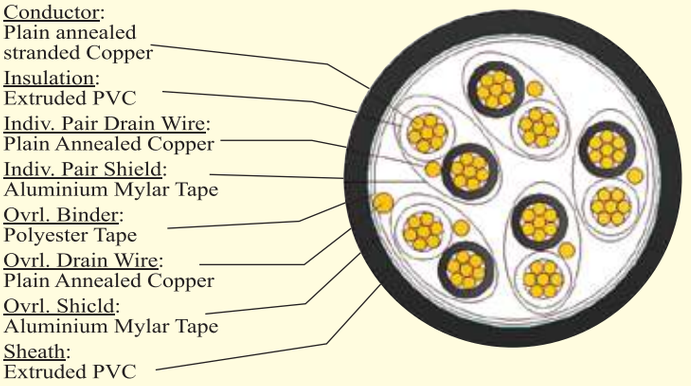
Conductor: Plain annealed Stranded/ Flexible Circular Copper, Class-2 & 5 as per IEC 60228

Insulation: Poly vinyl Chloride (PVC), TI1 temperature rating 70ºC as per BS 7655

Pair: Two core twisted together with suitable lay

Individual Shield: Aluminium Mylar Tape followed by Plain/ Tinned annealed copper Drain wire

Binder: Polyester Tape



Overall Shield: Aluminium Mylar Tape followed by Plain/ Tinned annealed copper Drain wire

Sheath: Poly vinyl Chloride (PVC), TM1 temperature rating 70ºC as per BS 7655

FR & FRLS Sheath available on request.

COLOR

Insulation: Pair color with continuous number print or Color chart as per BS 5308-2

Sheath: Black

PHYSICAL DATA						ELECTRICAL DATA
No. of pairs & cross Sectional area of conductor	No. of strands & Diameter of wire	Nominal thickness of insulation	Nominal thickness of sheath	Approx Overall diameter of Cable	Approx weight of Cable	Max. DC resistance of conductor at 20°C
Pair x mm ^{2}	no./mm	mm	mm	mm	kg/km	Ω/km
2Px0.5 rm	16/0.2	0.6	1.1	11.2	170	39.0
5Px0.5 rm	16.0.2	0.6	1.2	14.6	270	39.0
10Px0.5 rm	16/0.2	0.6	1.3	19.4	520	39.0
15Px0.5 rm	16/0.2	0.6	1.5	22.7	650	39.0
2Px0.75 rm	24/0.2	0.6	1.1	12.2	200	26.0
5Px0.75 rm	24/0.2	0.6	1.2	15.8	355	26.0
10Px0.75 rm	24/0.2	0.6	1.3	21.1	560	26.0
15Px0.75 rm	24/0.2	0.6	1.5	24.9	770	26.0
2Px1.5 rm	7/0.52	0.6	1.2	13.5	265	12.1
5Px1.5 rm	7/0.52	0.6	1.3	14.8	490	12.1
10Px1.5 rm	7/0.52	0.6	1.5	24.1	820	12.1
15Px1.5 rm	7/0.52	0.6	1.7	28.2	1110	12.1

Fire Alarm-Shielded (Fire Resistant up to 750°C)

RATED VOLTAGE
U_o/U: 300/500 V

FR-PVC Insulated & FRLS-PVC Sheathed Fire Resistant Shield Cable

APPLICATION

For fixed installation especially in fire alarm and emergency lighting circuits where circuit integrity must be maintained. To continue uninterrupted power supply even in fire condition these cables are designed to save essential equipment.

FEATURES

Maximum Operating Temperature 90ºC
Maximum Short Circuit Temperature 750ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332
Fire Resistant as per IEC 60331 & BS 6387

REFERENCE STANDARD

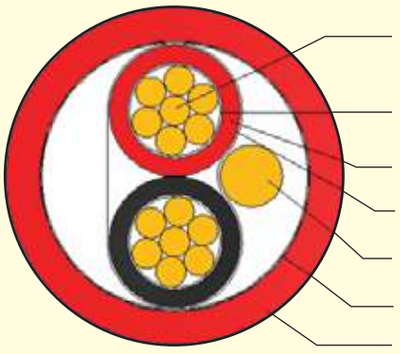
BS 5308-2, BS 6387, IEC 60331 & IEC 60332

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded Circular Copper, Class-1 & 2 as per IEC 60228

Fire barrier: Synthetic / Glass Mica Tape

Insulation: Flame Retardant (FR) PVC as per BS 7655



Plain annealed stranded copper conductor
Glass Mica Fire Barrier Tape
Extruded FR-PVC Insulation
Polyester Tape binder
Solid circular Copper drain wire
Aluminium Mylar shield
Extruded FRLS-PVC Outer sheath

Drain wire: Plain annealed Copper, Class-1 as per IEC 60228

Shield: Aluminium Mylar Tape

Sheath: Flame Retardant Low Smoke (FRLS) PVC as per BS 7655

COLOR

Insulation: Red & Black

Sheath: Red

PHYSICAL DATA								ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strands & Diameter of wire	Thikness of Mica tape	Nominal thickness of insulation	Nominal size of circuit protective conductor	Nominal thickness of sheath	Approx Overall Diameter	Approx weight of Cable	Max. DC resistance of conductor at 20°C	Current Carrying Capacity in conduit at 30°C	Current Carrying Capacity in air at 35°C
core x mm^2	no./mm	mm	mm	mm^2	mm	mm	kg/km	Ω/km	amps	amps
2 x 1.5 re	1/1.38	0.11	0.7	1.5 re	0.9	9.2	125	12.1	14	22
2 x 1.5 rm	7/0.52	0.11	0.7	1.5 re	0.9	9.5	130	12.1	14	22
2 x 2.5 re	1/1.78	0.11	0.8	2.5 re	1.0	10.5	175	7.41	18	30
2 x 2.5 rm	7/0.67	0.11	0.8	2.5 re	1.0	11.0	182	7.41	18	30

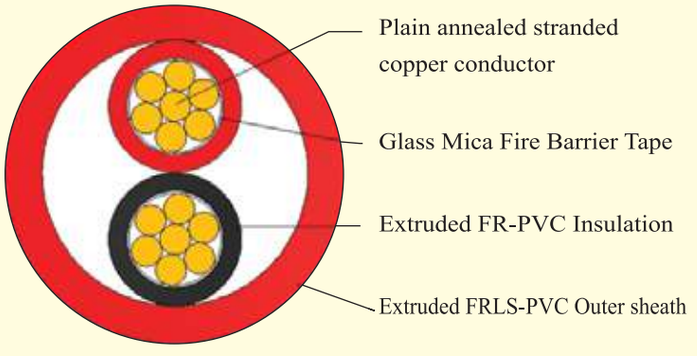
Fire Alarm-Un Shielded (Fire Resistant up to 750°C)

RATED VOLTAGE
U_o/U: 300/500 V

FR-PVC Insulated & FRLS-PVC Sheathed Fire Resistant Un-Shield Cable

APPLICATION

For fixed installation especially in fire alarm and emergency lighting circuits where circuit integrity must be maintained. To continue uninterrupted power supply even in fire condition these cables are designed to save essential equipment.



FEATURES

Maximum Operating Temperature 90ºC
Maximum Short Circuit Temperature 750ºC
Lead Free Environment Friendly
Excellent Mechanical & Electrical properties
Flame Retardant as per IEC 60332
Fire Resistant as per IEC 60331 & BS 6387

REFERENCE STANDARD

BS 5308-2, BS 6387, IEC 60331 & IEC 60332

CONSTRUCTION

Conductor: Plain annealed Solid/ Stranded Circular Copper, Class-1 & 2 as per IEC 60228

Fire barrier: Synthetic / Glass Mica Tape

Insulation: Flame Retardant (FR) PVC as per BS 7655

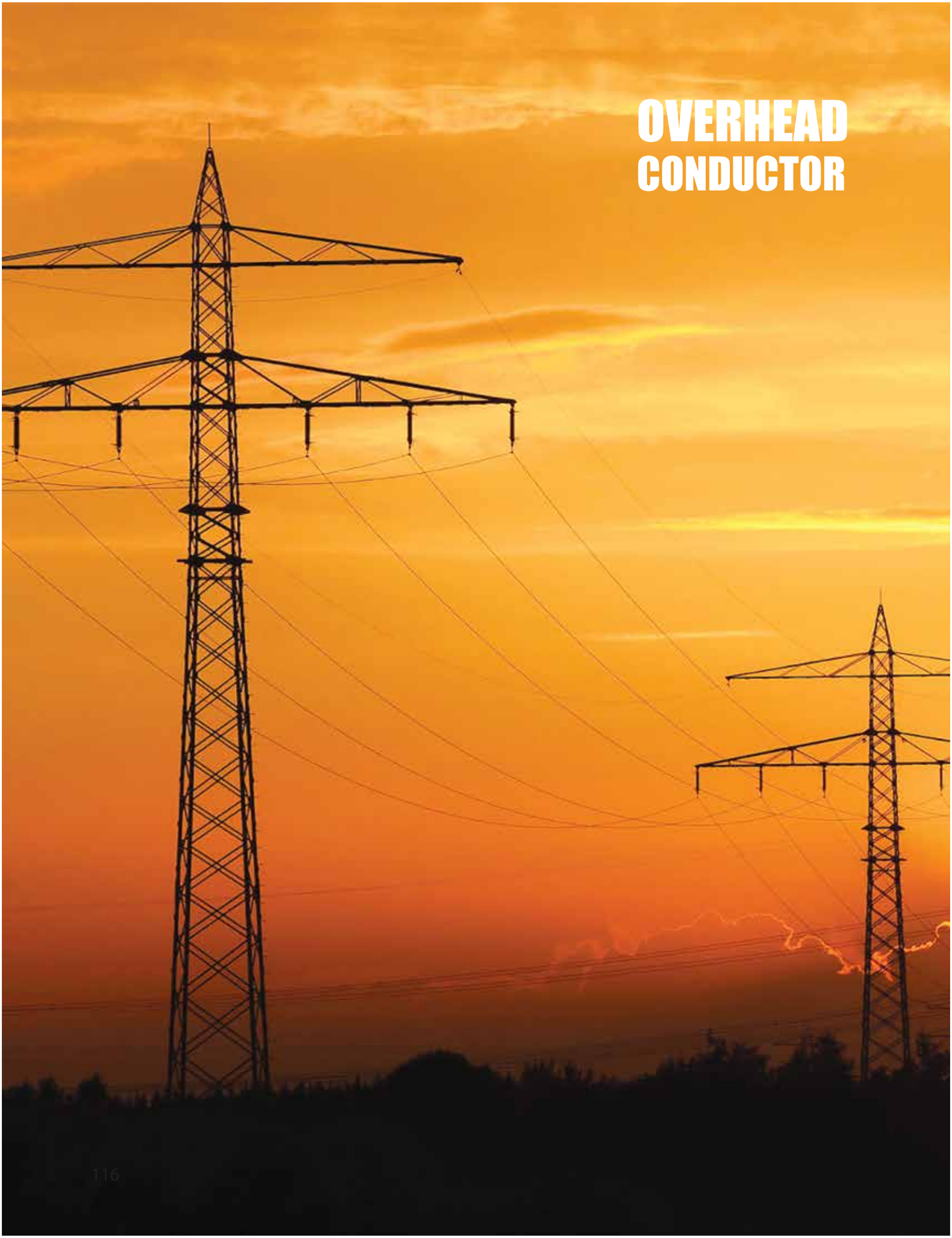
Sheath: Flame Retardant Low Smoke (FRLS) PVC as per BS 7655

COLOR

Insulation: Red & Black

Sheath: Red

PHYSICAL DATA							ELECTRICAL DATA		
Nominal Cross Sectional Area of Conductor	No. of strands & Diameter of wire	Thikness of Mica tape	Nominal thickness of insulation	Nominal thickness of sheath	Approx Overall diameter	Approx weight of Cable	Max. DC resistance of conductor at 20°C	Current Carrying Capacity in conduit at 30°C	Current Carrying Capacity in air at 35°C
core x mm^2	no./mm	mm	mm	mm	mm	kg/km	Ω/km	amps	amps
2 x 1.5 re	1/1.38	0.11	0.7	0.9	8.5	98	12.1	14	22
2 x 1.5 rm	7/0.52	0.11	0.7	0.9	9.0	105	12.1	14	22
2 x 2.5 re	1/1.78	0.11	0.8	1.0	10.2	135	7.41	18	30
2 x 2.5 rm	7/0.67	0.11	0.8	1.0	10.8	145	7.41	18	30



OVERHEAD CONDUCTOR

ALL ALUMINIUM CONDUCTOR (AAC)

APPLICATION

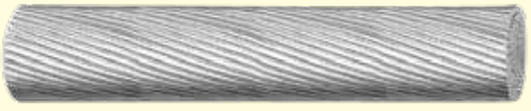
suitable for overhead low and medium voltage distribution lines.

STANDARD

BDS 1036, BS 215-1, IEC 207

CONSTRUCTION

Conductor: Stranded Hard drawn Aluminium Conductor.



All Aluminium Stranded Conductors (AAC)

Code name	Nominal Aluminium Area	Equivalent copper area	No. of strand & diameter of Al wires		Overall diamter of conductor	Nominal breaking load	Approx Weight	Current rating
-	mm^2	mm^2	nos.	mm	mm	kgf	kg/km	amps
Midge	22	14.2	7	2.06	6.18	408	64	114
Aphis	25	16.1	3	3.35	7.20	419	73	139
Gnat	25	16.1	7	2.21	6.60	468	74	124
Weevil	30	19.4	3	3.66	7.80	496	87	144
Mosquito	35	22.6	7	2.59	7.80	617	102	147
Ladybird	40	25.8	7	2.79	8.40	701	118	159
Ant	50	32.3	7	3.10	9.30	846	145	181
Fly	60	38.7	7	3.40	10.20	1010	174	199
Bluebottle	70	45.2	7	3.66	11.00	1156	203	219
Earwig	75	48.4	7	3.78	11.40	1218	216	227
Grasshopper	80	51.6	7	3.91	11.70	1303	232	238
Clegg	90	58.1	7	4.17	12.50	1482	264	256
Wasp	100	64.5	7	4.39	13.20	1632	292	271
Beetle	100	64.5	19	2.67	13.40	1776	293	274
Bee	125	80.6	7	4.90	14.70	2033	364	308
Cricket	150	96.8	7	5.36	16.10	2432	436	342
Hornet	150	96.8	19	3.25	16.30	2519	435	346
Caterpiller	175	113	19	3.53	17.70	2920	513	380
Chafer	200	129	19	3.78	18.90	3304	588	414
Spider	225	145	19	3.99	20.00	3672	655	439
Cockroach	250	161	19	4.22	21.10	4120	733	470
Butterfly	300	194	19	4.65	23.30	4966	890	528
Moth	350	226	19	5.00	25.00	5748	1029	572
Drone	350	226	19	3.58	25.10	5858	1027	572
Locust	400	258	19	5.36	26.80	6601	1182	626
Centipede	400	258	37	3.78	26.50	6434	1145	619
Maybug	450	290	37	4.09	28.60	7547	1340	676
Scorpion	500	323	37	4.27	29.90	8156	1461	710
Cicada	600	387	37	4.65	32.60	9682	1432	784
Tarantula	750	484	37	5.23	36.60	12247	2192	899

ALL ALUMINIUM CONDUCTOR (AAC-INSULATED & AAC)

APPLICATION

suitable for overhead low and medium voltage distribution lines.

STANDARD

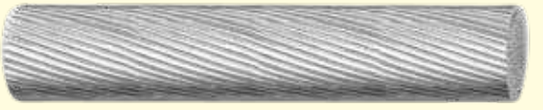
BDS 1036, BS 215-1, ASTM B231, BS 6485, IEC 207

CONSTRUCTION

Conductor: Stranded Hard drawn Aluminium Conductor.

Insulation: PVC (For AAC-INS)

AAC-INS



AAC

Insulated All Aluminium Stranded Conductor (AAC-INS)

As per BS-215, Part-1 & BS 6485, BDS 1036

Code name	Cross sectional area of Al	Strands & wire diameter	Dia. Of bare Conductor	Minimum thickness of Insulation	Approx overall diameter	Nominal breaking load	Approx. Weight of ins. Cond	Current rating
-	mm^2	nos./mm	mm	mm	mm	Kgf	kg/km	amps
Midge	23.3	7/2.06	6.18	0.8	8.2	408	95	106
Gnat	26.9	7/2.21	6.60	0.8	8.6	468	110	115
Mosquito	36.9	7/2.59	7.80	0.8	9.8	617	143	134
Ant	52.8	7/3.10	9.30	0.8	11.3	846	215	172
Fly	63.6	7/3.40	10.20	0.8	12.2	1010	230	191
Blue Bottle	73.6	7/3.66	11.00	0.8	13.0	1156	261	210
Earwig	78.6	7/3.78	11.40	0.8	13.4	1218	315	218
Grasshopper	84.1	7/3.91	11.70	0.8	13.8	1303	292	228
Clegg	95.6	7/4.17	12.50	0.8	14.6	1482	330	245
Wasp	106.0	7/4.39	13.20	0.8	15.6	1632	389	260

All Aluminium Stranded Conductor (AAC)

As per BDS-1036, ASTM B 231 (Class-A & AA) & IEC-207

Code name	Nominal Aluminium area		No. of strand & diameter of Al wires		Overall diamter of conductor	Nominal breaking load	Approx Weight	Current rating
-	AWG or MCM	mm^2	nos.	mm	mm	kgf	kg/km	amps
Rose	4	21.16	7	1.96	5.9	375	58	104
Iris	2	33.61	7	2.47	7.4	574	92	136
Poppy	1/0	53.48	7	3.12	9..4	846	148	180
Aster	2/0	67.42	7	3.5	10.5	1066	186	207
Pholx	3/0	85.03	7	3.93	11.8	1291	234	237
Oxlip	4/0	107.2	7	4.42	13.3	1628	296	273
Valerian	250	126.7	19	2.91	14.6	2044	348	305
Daisy	266.8	135.2	7	4.96	14.9	2053	373	313
Peony	300	152	19	3.19	16	2404	419	340
Tulip	336.4	170.5	19	3.38	16.9	2697	470	364
Daffodil	350	177.4	19	3.45	17.3	2805	490	373
Goldentuft	450	228	19	3.91	19.6	3462	629	432
Cosmos	477	242	19	4.02	20.1	3670	665	447
Zinnia	500	253	19	4.12	20.6	3847	698	459
Dahlia	556.5	282	19	4.35	21.8	4282	779	489

ALUMINIUM CONDUCTOR STEEL REINFORCED (ACSR)

APPLICATION

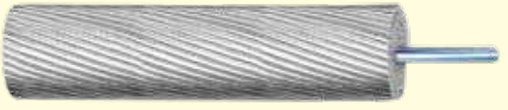
suitable for overhead transmission & distribution lines.

STANDARD

BDS 1037, BS 215-2, ASTM B-232, IEC 209

CONSTRUCTION

Conductor: Stranded Hard drawn Aluminium Conductor Reinforced by Galvanized steel wire.



As per BDS-1037, BS-215, Part-2 & IEC 209

Code name	Cross Sectional area		No. & dia of wire		Overall diameter of conductor	Colculated breaking load	Approx weight of conductor			Current Rating
	Conductor	Al	Al	Steel			Conductor	Al	Steel	
-	mm^2	mm^2	nos./mm	nos./mm	mm	kgf	kg/km	kg/km	kg/km	amps
Squirrel	24.46	20.97	6/2.11	1/2.11	6.33	806	85	58	27	109
Gopher	30.60	26.23	6/2.36	1/2.36	7.08	979	106	72	34	126
Weasel	36.86	31.6	6/2.59	1/2.59	7.77	1168	108	73	35	134
Fox	42.79	36.66	6/2.79	1/2.79	8.37	1346	149	101	48	147
Ferret	49.46	42.39	6/3.00	1/3.00	9.00	1550	172	117	55	161
Rabbit	61.67	52.85	6/3.35	1/3.35	10.05	1876	215	146	69	185
Horse	116.16	73.36	12/2.79	7/2.79	13.95	6241	538	202	336	268
Racoon	91.92	78.79	6/4.1	1/4.10	12.3	2774	321	218	103	231
Cat	110.78	94.96	6/4.5	1/4.50	13.5	3335	387	263	124	248
Hare	122.42	104.93	6/4.72	1/4.72	14.16	3671	425	289	136	273
Dog	118.53	104.98	6/4.72	7/1.57	14.15	3335	395	289	106	273
Tiger	161.85	131.1	30/2.36	7/2.36	16.52	5914	603	362	241	323
Wolf	194.94	158.06	30/2.59	7/2.59	18.13	7056	726	436	290	355
Dingo	167.46	158.57	18/3.35	1/3.35	16.75	3640	506	437	69	349
Caracal	194.48	184.24	18/3.61	1/3.61	18.05	4181	588	508	80	383
Panther	261.54	212.06	30/3.00	7/3.00	21.00	9402	974	585	289	421
Lion	293.87	238.27	30/3.18	7/3.18	22.26	10258	1094	657	437	448
Elk	588.46	477.13	30/4.50	7/4.50	31.5	20211	2190	1315	875	679

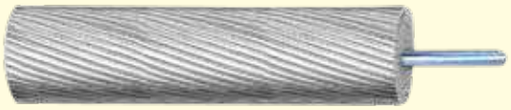
As per BDS-1037, ASTM B 232 & IEC-209

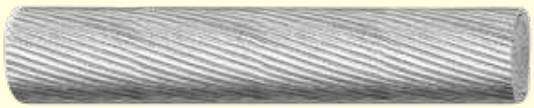
Code name	Cross Sectional area		No. & dia of wire		Overall diameter of conductor	Colculated breaking load	Approx weight of conductor			Current Rating
	AWG or	Al	Al	Steel			Condocutor	Al	Steel	
-	MCM	mm^2	nos./mm	nos./mm	mm	kgf	kg/km	kg/km	kg/km	amps
Swan	4	21.15	6/2.12	1/2.12	6.36	846	85	58	27	105
Swallow	3	26.65	6/2.38	1/2.38	7.14	1040	108	73	35	121
Sparrow	2	33.58	6/2.67	1/2.67	8.01	1290	136	92	44	139
Robin	1	42.39	6/3.00	1/3.00	9	1620	171	116	55	160
Raven	1/0	53.48	6/3.37	1/3.37	10.11	1990	216	147	69	183
Quail	2/0	67.42	6/3.78	1/3.78	11.34	2400	272	185	87	210
Pigeon	3/0	85.03	6/4.25	1/4.25	12.75	3010	345	234	111	241
Penguin	4/0	107.23	6/4.77	1/4.77	14.31	3790	433	294	139	276
Waxwing	266.8	135.16	6/3.09	1/3.09	15.45	3120	430	372	58	319
Ostrich	300	152.00	26/2.73	7/2.12	17.28	5760	614	420	194	346
Merlin	336.4	170.45	18/3.47	1/3.47	17.35	3940	543	469	74	366
Chickadee	397.5	201.42	18/3.77	1/3.77	18.85	4510	642	554	88	403
Pelican	477	241.68	18/4.14	1/4.14	20.7	5330	774	668	106	449
Hawk	477	241.68	26/3.44	7/2.68	21.8	8870	977	667	310	455
Hen	477	241.68	30/3.20	7/3.20	22.4	10800	1109	337	442	457
Grosbeak	636	322.46	26/3.97	7/3.09	25.15	11400	1302	893	409	538

ACSR CONDUCTOR, BARE ALUMINIUM WIRE & STRANDED GALVANIZED GUY WIRE.

APPLICATION

suitable for overhead transmission & distribution lines.





Bare ACSR Conductor

As per ASTM B232, IEC 209, BDS-1037

REB Item No.	Size	Code Name	No. of strand & wire diameter		Overall diameter	Ultimate strength	Approx weight
			Steel	Aluminium			
			nos./mm	nos./mm	mm	kg	kg/km
D-1	3 AWG	SWALLOW	1/2.379	6/ 2.379	7.137	1014	108
D-2	1/0 AWG	RAVEN	1/3.37	6 /3.37	10.109	1926	216
D-3	4/0 AWG	PENGUIN	1/ 4.77	6 /4.77	14.3	3760	433
D-28	477 MCM	HAWK	7/ 2.674	26 /3.439	21.793	8845	977

English unit equivalents

REB Item No.	Size	Code Name	Stranding & wire diameter		Overall diameter	Ultimate strength	Approx weight
			Steel	Aluminium			
			nos./inch	nos./inch	inch	Ibs	Ibs/inch
D-1	3 AWG	SWALLOW	1/.0937	6/.0937	0.281	2235	381
D-2	1/0 AWG	RAVEN	1/.1327	6 /.1327	0.398	4245	768
D-3	4/0 AWG	PENGUIN	1/.1878	6 /. 1878	0.563	8290	1537
D-28	477 MCM	HAWK	7/.1035	26 /.1 354	0.858	19500	3468

Bare Aluminium Wire

As per ASTM B 230, B-609, B531, B193 & 233

Description	REB Item.	Size	No. & dia of wire	Approximate conductor dia	Calculated breaking load	weight	Max. D.C Resistance of Conductor at 20°C
			nos./mm	mm	kg	kg/km	Ω/km
Hard drawn Aluminium Grounding wire	D-4	4 AWG	1/5.189	5.189	342 (min)	57.2	1.3363
Annealed Aluminium Tie wire	D-5	4 AWG	1/5.189	5.189	167 (max)	57.2	1.3251

GALVANIZED STEEL GUY/ EARTH WIRE

ASTM A-475, ASTM B-498 & BS 183

Description	Size	No. & dia of wire	Approximate conductor dia	Calculated breaking load	weight
	mm^2	nos./mm	mm	kg	kg/km
GUY/EARTH WIRE	54.55	7/3.15	9.45	6400 (min)	430

MEDIUM HARD DRAWN COPPER & SERVICE DROP CABLE

APPLICATION

suitable for overhead line

Bare Copper Conductor and Wire

As per ASTM B3 & ASTM B2, ASTM B193

Description	REB Item.	Size	No. of strand & diameter of wires	Approximate conductor dia	Calculated breaking load	Weight	Max. D.C Resistance of Conductor at 25°C
			nos./mm	mm	kgf	kg/km	Ω/km
Annealed copper wire	D-6	6 AWG	1/4.115	4.115	346 (max)	118	1.404
MHD stranded CU conductor	D-7	3 AWG	3/3.360	7.254	1070 (min)	239	0.683
MHD stranded CU conductor	D-8	1/0 AWG	7/3.119	9.347	2155 (min)	483	0.344
MHD stranded CU conductor	D-9	4/0 AWG	7/4.420	13.259	3694 (min)	973.5	0.166
MHD stranded CU conductor	DS-9	4/0 AWG	19/2.68	13.41	4371 (min)	973.0	0.173
MHD stranded CU conductor	D-10	2/0 AWG	7/3.502	10.5	2694 (min)	611	0.275
MHD stranded CU conductor	DS-10	2/0 AWG	19/2.13	10.64	2162 (min)	613	0.271
MHD stranded CU conductor	DS-37	350 MCM	37/2.470	17.30	5662 (min)	1608	0.101
MHD stranded CU conductor	DS-38	500 MCM	37/2.951	20.6	10231 (min)	2297	0.07

Pre-assembled XLPE Insulated Aluminium Conductors with ACSR Messenger Wire

As PER ASTM B231, B232, ICEA -S-66- 524, NEMA WC7
Duplex and Quaduplex Cables

REB Item No.	Conductor AWG		Conductor Code Name		Number of phase	No. of strand & diameter of wires			Insulation thickness (XLPE)	Overall conductor diameter		Approx weight	Max. D.C Resistance of Conductor at 20°C		Current rating at 35° C
	Phase	Messenger	Phase	Messenger		Phase	Messenger			Insulated phase	Messenger		phase	Messenger	
						Al	Al	Steel							
						nos./mm	nos./mm	nos./mm	mil/mm	mm	mm	kg/km	Ω/km	Ω/km	amp
D-11	6	6	PEACHBELL	TURKEY	1	7/1.56	6/1.68	1/1.68	45/1.143	6.97	5.04	114	2.169	2.157	70
D-12	3	3	LILY	SWALLOW	1	7/2.20	6/2.38	1/2.38	45/1.143	8.89	7.14	212	1.076	1.074	98
D-14	3	3	LILY	SWALLOW	3	7/2.20	6/2.38	1/2.38	45/1.143	8.89	7.14	420	1.076	1.074	86
D-15	1/0	1/0	POPPY	RAVEN	3	7/3.12	6/3.37	1/3.37	60/1.524	12.41	10.11	835	0.5372	0.535	165
D-20	4	4	ROSE	SWAN	3	7/1.96	6/2.12	1/2.12	45/1.143	8.17	6.36	340	1.632	1.35	92
D-24	4/0	4/0	OXLIP	PENGUN	3	7/4.42	6/4.77	1/4.77	60/1.524	16.31	14.31	1580	0.2688	0.2676	198
D-25	6	6	PEACHBELL	TURKEY	3	7/1.56	6/1.68	1/1.68	45/1.143	6.91	5.04	230	2.169	2.157	60

Pre-assembled PVC Insulated Aluminium Conductor with ACSR Messenger Wire

As PER ASTM B230, B231, B-232 & B-498, ICEA -S-66- 524, NEMA WC-7
Duplex Cable

REB Item No.	Conductor AWG		Conductor Code Name		Number of phase	Conductor stranding & approximate diameter			Insulation thickness (PVC)	Overall conductor diameter		Approx weight	Max. D.C Resistance of Conductor at 20°C		Current rating at 35° C
	Phase	Messenger	Phase	Messenger		Phase	Messenger			Insulated phase	Messenger		phase	Messenger	
						Al	Al	Steel							
						nos./mm	nos./mm	nos./mm	mil/mm	mm	mm	kg/km	Ω/km	Ω/km	amp
D-63	6	6	PEACHBELL	TURKEY	1	7/1.56	6/1.68	1/1.68	60/1.524	7.73	5.04	140	2.169	2.157	58

XLPE INSULATED MHD COPPER CONDUCTOR & HDPE INSULATED ACSR CONDUCTOR

APPLICATION

suitable for overhead line

Medium Hard Drawn XLPE Insulated Copper Conductor

As PER ASTM B2 & B8, ICEA-S-66-524, NEMA WC7

REB Item No.	Conductor Size	No. of strand & diameter of wires	Insulation thickness	Overall diameter	Minimum Breaking Load	Maximum D.C Resistance of Conductor at 25°C	Approx weight of Conductor
		nos./mm	mils/mm	mils/mm	kgf	Ω/km	kg/km
D-16	3 AWG	3/3.36	60/1.52	405/10.3	1070	0.683	283
D-17	1/0 AWG	7/3.12	62/1.57	481/12.22	2155	0.344	541
D-18	4/0 AWG	7/4.42	62/1.57	630/16.0	3694	0.166	1050
D-19	1000 MCM	61 /3.25	94/2.38	1306/34.0	17570	0.0356	4830

Bare Aluminium Alloy Conductor

As PER ASTM B 98-90 & B 399-97

REB Item No.	Size	Code Name	Number of strand	Strand diameter		Conductor overall diameter		Ultimate conductor strength	Approx weight
	kcmils			inch	mm	inch	mm	kg	kg/km
D-29	77.47	AMES	7	0.1052	2.67	0.316	8.01	1274	107.5
D-30	123.2	AZUSA	7	0.1327	3.37	0.398	10.11	1937	171.0
D-31	246.9	ALLIANCE	7	0.1878	4.77	0.563	14.31	3884	342.6
D-32	559.5	DARIEN	19	1.1716	4.36	0.858	21.80	8522	776.3

HDPE Insulated ACSR Conductor

ASTM B-230, B-232, B-498, NEMA WC-7, ICEA S-66-524

REB Item No.	Size of Conductor	No. of strands & diameter of wire		Insulation Thiekness	Approx Over all diameter of Conductor	Approx Weight of Conductor	Minimum breaking stength	Minimum DC resistance of Conductor at 20°C	Current rating at 35°C ambient temp.
		Al	Steel						
	AWG	no/mm	no/mm	mm	mm	kg/km	kgf	Ω/km	Amp.
D-59	2	6/2.67	1/2.67	3.81	15.65	274	1228	0.853	126
D-61	1/0	6/3.37	1/3.37	3.81	17.73	370	1887	0.535	168
D-62	4/0	6/4.77	1/4.77	3.81	21.92	634	3598	0.2672	260

Super Enamel Wire

Description	Modified polyester (PE)	Polyesterimide (PEI)	Polyester (PE)	Polyvinyl Acetal (PVA)
Thermal Class	F- 155^{0}C	H- 180^{0}C	B- 130^{0}C	A- 105^{0}C/120^{0}C
Colour	Light to Dark brown	Light to Dark brown	Light to Dark brown	Old Gold
Application	General purpose rotating & static electrical equipments	PHP motors, Hand tools, Hermetic applications, Ignition coils & all thermal class-'H' equipments	General purpose rotating & static electrical equipments.	Motors & coils required to withstand high mechanical properties. Auto electric parts, power & distribution transformers.

TECHNICAL DATA				
Cut through	270^{0}C	320^{0}C	240^{0}C	170^{0}C
Heat shock	180^{0}C	200^{0}C	155^{0}C	155^{0}C
Abrasion resistance	Good	Good	Good	Excelent
Resistance to solvents	Good	Excelent	Good	Excelent
Mechanical Properties	Fair	Good	Fair	Excelent
Flexibility& Adherence	Fair	Very Good	Fair	Excelent
Special Characteristics/ Advantages.	Good Thermal & Electrical properties, Good solvent resistance.	Outstanding Heat resisitance, Excellent heat shock resistance.	Good Thermal & Electrical properties, Good solvent resistance.	Good resistance to transformer oil, good abrasion resistance & Heat shock resistance.

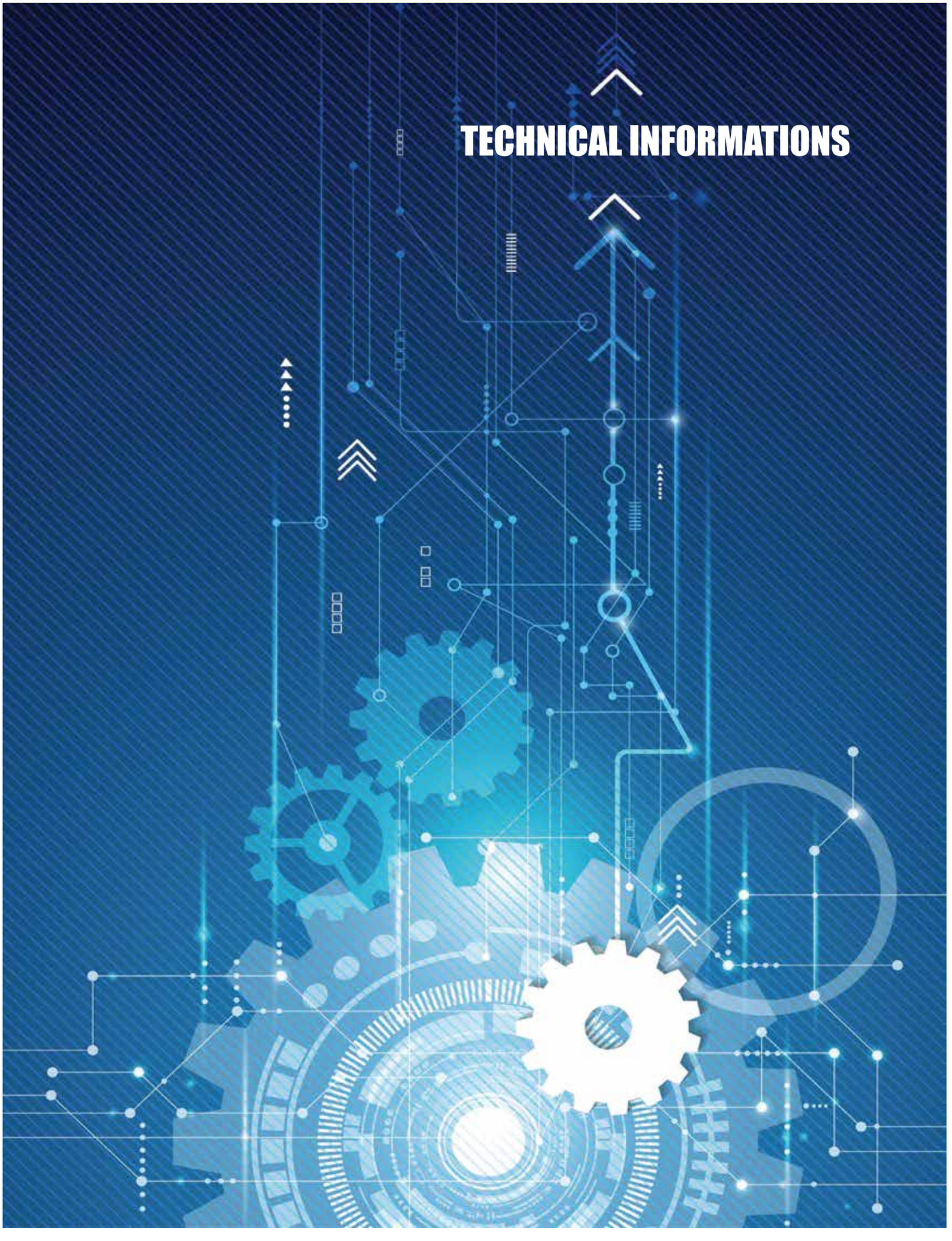
DIAMETERS AND INCREASE IN DIAMETERS OF ENAMELLED ROUND COPPER WIRE

Nominal conductor Diameter		Conductor tolerance	Grade-1		Grade-2		Grade-3	
			Minimum Increase	Maximum overall dia	Minimum Increase	Maximum overall dia	Minimum Increase	Maximum overall dia
SWG	mm	± mm	mm	mm	mm	mm	mm	mm
11	2.946	0.030	0.045	3.029	0.084	3.072	0.127	3.112
12	2.642	0.027	0.043	2.772	0.081	2.764	0.123	2.803
13	2.337	0.024	0.042	2.415	0.079	2.455	0.119	2.493
14	2.032	0.021	0.041	2.108	0.077	2.147	0.116	2.184
15	1.829	0.019	0.040	1.903	0.075	1.941	0.113	1.977
16	1.626	0.017	0.039	1.698	0.073	1.735	0.110	1.770
17	1.422	0.015	0.038	1.492	0.071	1.528	0.107	1.562
18	1.219	0.013	0.035	1.285	0.067	1.318	0.100	1.350
19	1.016	0.011	0.034	1.08	0.065	1.113	0.098	1.144
20	0.914	0.010	0.034	0.976	0.063	1.008	0.095	1.038
21	0.813	0.009	0.032	0.872	0.060	0.902	0.090	0.931
22	0.711	0.008	0.030	0.766	0.056	0.795	0.085	0.822
23	0.610	0.006	0.027	0.659	0.050	0.684	0.075	0.708
24	0.559	0.006	0.025	0.605	0.047	0.629	0.071	0.652
25	0.508	0.006	0.025	0.554	0.047	0.578	0.071	0.601
26	0.457	0.005	0.024	0.501	0.045	0.523	0.067	0.544
27	0.417	0.005	0.022	0.458	0.042	0.48	0.064	0.500
28	0.376	0.005	0.021	0.417	0.040	0.435	0.060	0.454
29	0.345	0.004	0.020	0.382	0.038	0.401	0.057	0.418
30	0.315	0.004	0.019	0.349	0.035	0.367	0.053	0.384
31	0.295	0.004	0.019	0.329	0.035	0.347	0.053	0.364
32	0.274	0.004	0.018	0.306	0.033	0.323	0.050	0.339
33	0.254	0.004	0.018	0.286	0.033	0.303	0.050	0.319
34	0.234	0.004	0.017	0.265	0.032	0.281	0.048	0.296
35	0.213	0.003	0.015	0.241	0.029	0.255	0.043	0.269
36	0.193	0.003	0.014	0.219	0.027	0.232	0.039	0.245
37	0.173	0.003	0.013	0.197	0.025	0.210	0.036	0.222
38	0.152	0.003	0.012	0.174	0.023	0.186	0.033	0.197
39	0.132	0.003	0.011	0.152	0.021	0.162	0.030	0.171
40	0.122	0.003	0.010	0.141	0.019	0.151	0.028	0.160

Note:	
	1) For intermediate conductor diameter minimum increase corresponding to the next largest nominal conductor diameter shall be taken.
	2) Maximum overall diameter for intermediate conductor size is equal to maximum overall diameter of next largest nominal conductor diameter corrected by difference in conductor diameters.

DIAMETERS TOLERANCE & RESISTANCES OF ENAMELLED ROUND CO

Nominal conductor Diameter		Conductor tolerance	Conductor diameter		Nominal conductor Area	Conductor resistance at 20 ^{0}C		
			Minimum	Maximum		Nominal	Minimum	Maximum
SWG	mm	± mm	mm	mm	mm	Ω/meter	Ω/meter	Ω/meter
11	2.946	0.030	2.916	2.976	6.8164	0.002508	-	-
12	2.642	0.027	2.615	2.669	5.4822	0.003118	-	-
13	2.337	0.024	2.313	2.361	4.2895	0.003985	-	-
14	2.032	0.021	2.011	2.053	3.2429	0.005271	-	-
15	1.829	0.019	1.810	1.848	2.6274	0.006506	-	-
16	1.626	0.017	1.609	1.643	2.0765	0.008232	-	-
17	1.422	0.015	1.407	1.437	1.5881	0.010764	-	-
18	1.219	0.013	1.260	1.232	1.1671	0.014647	-	-
19	1.016	0.011	1.005	1.027	0.8107	0.021085	-	-
20	0.914	0.010	0.904	0.924	0.6561	0.026053	0.025276	0.026862
21	0.813	0.009	0.804	0.822	0.5191	0.032929	0.031938	0.033960
22	0.711	0.008	0.703	0.719	0.3970	0.043054	0.041745	0.044419
23	0.610	0.006	0.604	0.616	0.2922	0.058492	0.056872	0.060174
24	0.559	0.006	0.553	0.565	0.2454	0.069651	0.067602	0.071785
25	0.508	0.006	0.502	0.514	0.2027	0.08434	0.08168	0.08711
26	0.457	0.005	0.452	0.462	0.1640	0.10421	0.10111	0.10745
27	0.417	0.005	0.412	0.422	0.1366	0.12516	0.12118	0.12933
28	0.376	0.005	0.371	0.381	0.1110	0.15395	0.14866	0.15949
29	0.345	0.004	0.341	0.349	0.09348	0.18286	0.17617	0.18990
30	0.315	0.004	0.311	0.319	0.07793	0.21935	0.21207	0.22697
31	0.295	0.004	0.291	0.299	0.06835	0.25010	0.24139	0.25924
32	0.274	0.004	0.270	0.278	0.05896	0.28990	0.27923	0.30113
33	0.254	0.004	0.250	0.258	0.05067	0.33735	0.32420	0.35124
34	0.234	0.004	0.230	0.238	0.04301	0.39749	0.38098	0.41498
35	0.213	0.003	0.210	0.216	0.03563	0.47973	0.46254	0.49779
36	0.193	0.003	0.190	0.196	0.02926	0.58430	0.56175	0.60810
37	0.173	0.003	0.170	0.176	0.02351	0.72721	0.69668	0.75960
38	0.152	0.003	0.149	0.155	0.01815	0.94203	0.89824	0.98880
39	0.132	0.003	0.129	0.135	0.01368	1.24912	1.18410	1.31917
40	0.122	0.003	0.119	0.125	0.01169	1.46229	1.38114	1.55020


TECHNICAL INFORMATIONS

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO BDS 900 & BS 6004

1. DEFINED CONDITIONS :

The basis of the current ratings of cables has been so chosen for normal ambient temperature of 35° C and for normal laying conditions as follows:

A. For Groups of unenclosed systems of single core cables :

1) The horizontal clearance between the systems is around 150 mm and not less than six times the individual cables diameter or one time the overall width of the individual system
2) The vertical clearance between systems is not less than 150 mm.
3) If the numbers of systems are more four, they are installed in a horizontal plane.

B. For Groups of unenclosed multi core cables :

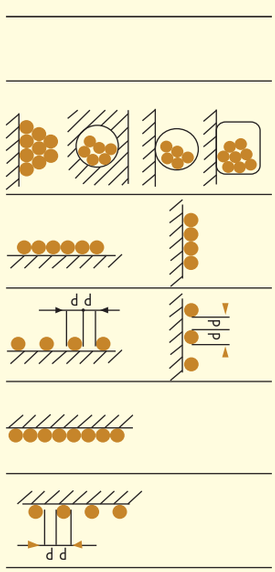
1) The horizontal clearance between the systems is around 150 mm and not less than six times the individual cables diameter
2) The vertical clearance between cables is not less than 150 mm
3) If the numbers of cables are more than four, they are installed in a horizontal plane

2. DEVIATED CONDITIONS

If the actual conditions of installations are not same as normal conditions the current rating given are to be multiplied with the rating factors as given below:

Ambient Temperature° C	25	30	35	40	45	50	55	60
Rating factors for cables having excess-current protection which will operate within four hours at 1.5times of the designed load current.	1.13	1.06	1.0	0.93	0.84	0.76	0.65	0.53
Rating factors for cables having no excess current protection as above	1.05	1.03	1.0	0.97	0.94	0.91	0.79	0.65

Rating Factors for the Grouping of Cables



Number of multicore cables or number of alternating and rotary current circuits for single-core cables (2 and 3 current carrying conductors)

1	2	3	4	5	6	7	8	9	10	12	14	16	18	20
Laid in bundles directly on the wall, on the floor, in electro-installation ducts or conduits and on or in the wall														
1.0	0.80	0.70	0.65	0.60	0.57	0.54	0.52	0.50	0.48	0.45	0.43	0.41	0.39	0.38
Single-layer on the well or on the floor in contact with one another														
1.0	0.85	0.79	0.75	0.73	0.72	0.72	0.71	0.70						
Single-layer on the wall or on the fioor. Distance between two cables: diameter of cable														
1.0	0.94	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Single-layer under the ceiling in contact with one another														
0.95	0.81	0.72	0.68	0.66	0.64	0.63	0.62	0.61						
Single-layer under the ceiling. Distance between two cables: diameter of cable														
0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85

1) according to IECTC 64 (Sec) 261. edition March 1979

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO VDE 0271, IEC 6050 2-1

The current carrying capacities of a cables should be limited in such a degree that all locations in cable system which causes the generated heats under given proportions to lead safely in the environment.

The heat flow depends on the inner heat -resistance between conductor and outer surface of the cable and as well as from the heat emission to the surroundings.

DEFINED CONDITIONS:

The basis of the current ratings has been so chosen that they, without considering any multiplication factor, are suitable for cable laid in our country under the following Defined conditions:

Indication For calculation:

a) Cable Laying in Ground:

1) Temperature of the soil at the depth of laying = 30 C°
2) Depth of laying = 70 cm
3) Cable way is covered with layers of sand and brick.
4) Thermal resistivity of the soil at continuous full loading of the cables = 120 C̊cm/W.
5) One single core d.c. cable installed separately, or one multi core cable installed separately, or three single core cables in three phase system in stalled in flat formation with clearance of 7 cm. or in trefoil form ation, touching each other.
6) The cable way is through a pipe of length not more than 6 meters.

b) Cables lying in Air.

1) Ambient air temperature = 35°C
2) One single core d.c cable installed separately free in air, or, one multi core cable-installed separately free in air, or, one three phase system, comprising cable three single core cables installed separately free in air in flat formation with a clearance of one diameter between individual single-core cables or in trefoil formation each individual single core cable being in touch with each other.
3) One single core d.c. cable, one multi core cable or one three phase system of three single core cables installed free in air with minimum clearance of.

a) 2 cm from floor, wall or roof of the room.
b) Twice the cable diameter between two cables and four times the cables diameter between two systems.
c) 30 cm vertically between layers installed one above the other.

4) Cable is protected against radiation of heat from sun or any other source.

Key information for current carrying capacity of cable.

- Radiation of heats and solar influence must be taken into consideration, where a good air circulation is needed.
- A sufficient large distance is to be retained between the cables and the heating elements, because badly insulated heating
- elements often raise additionally the temperature of the cable
- Distance between the cable and the wall, floor or ceiling = 2 cm
- Distance between the cables being laid one above the other = 2 xD
- Distance between the cable systems being laid one above the other = 20 cm
- Distance between the cables being laid side by side = 2 x D
- Approx. Value of Specific Ground Thermal Resistivity

Very moist area	= 70° C.cm/w
Moist area	= 100° C.cm/w
Dry area	= 200° C.cm/w
Very dry area	= 300° C.cm/w

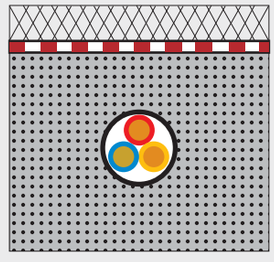
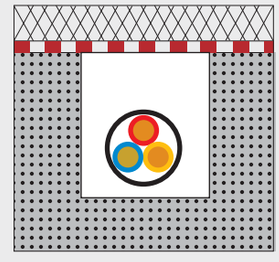
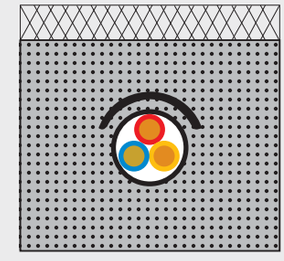
DEVIATED CONDITIONS FOR UNDERGROUND

If the actual conditions of cable laying are not same as normal conditions, the current rating value of cables are to be multiplied with rating factors given in the following tables:

Variation of Depth of Laying (Twin or Multi-core Cables)

	Depth of Laying in cm									
	< 70	< 90	< 105	< 120	< 150	< 180	< 270	< 360	< 450	540 or more
Rating factor	1	0.99	0.98	0.97	0.96	0.95	0.92	0.91	0.90	0.89

Rating Factors for Cables laid in sand

Condition of laying		
Punned down sand and cover of bricks	Single-Core or multi- core cable lad in groud and added macheiad protection for cables with are gilled hollow.	Single-core or multi-core cables direct in the ground with added mechanical protection and hollow filled with send.
		
1	0.80	0.86

Conversion factors for above

Variation of specific thermal resistivity of soil for Cables :Factor A

	Specific thermal resistivity of soil on° C cm/W						
	70	100	120	150	200	250	300
25 mm ^{2} & Below	1.18	1.07	1	0.93	0.83	0.77	0.71
35 mm ^{2} to 95 mm ^{2}	1.22	1.08	1	0.93	0.82	0.75	0.69
120 mm ^{2} to 240 mm ^{2}	1.23	1.08	1	0.93	0.82	0.74	0.69
300 mm ^{2} & Above	1.25	1.09	1	0.93	0.82	0.74	0.69

DEVIATED CONDITIONS FOR UNDERGROUND

Variation of Specific Thermal Resistivity of Soil for Cables : Factor B

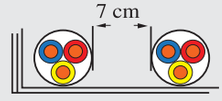
	Voltage E/Eo KV	Specific thermal resistivity of soil on °C cm / W						
		70	100	120	150	200	250	300
3 and 4 core cable	1/0.6	1	1	1	1	1	1	1
Twin core cable	1/0.6	0.97	0.99	1	1	1.01	1.01	1.02
Single core D.C.	1/0.6	0.97	0.99	1	1	1.01	1.01	1.02
3 core cable with each core shielded	6/3.5 10/5.8	0.96	0.99	1	1.01	1.02	1.03	1.04
3 unarmoured single core cable	1/0.6 6/3.5 10/5.8	1.01	1	1	0.98	0.97	0.97	0.96

For Variation of specific Thermal Resistivity of Soil, PVC Cables from 120° C cm/W and current rating values in Table : 9 to 21 are to be multiplied by both the factor A and B to obtain the actual rating.

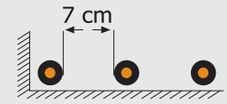
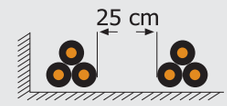
Variation factors for Ambient Temperature of Cables Laid in Underground

	Voltage Eo/E KV	Ambient Temperature° C								
		15	20	25	30	35	40	45	50	55
Rating factor	0.6/1.0	1.18	1.12	1.07	1.00	0.95	0.87	0.79	0.70	0.60

Group Rating Factors for Multicore and Single - core D.C. Cables in the Ground

Condition of laying	No. of Systems or Cables						
	2	3	4	5	6	8	10
Cables laid direct in the Ground in flat formation, clearance 7 cm (thickness of a brick) between the cables 	0.85	0.75	0.68	0.64	0.60	0.56	0.53

Group Rating Factors for Single -core Cables in Three -phase System in the Ground

Condition of laying	No. of Systems or Cables		
	2	3	4
Cables laid direct in the ground in flat formation, clearance 7 cm between systems and also between individual cables in each system 	0.82	0.74	0.68
Cables laid direct in the ground in trefoil formation, touching each other, clearance 25 cm between systems 	0.85	0.77	0.72

Multi-core Cable in Steel or Earthenware Pipe

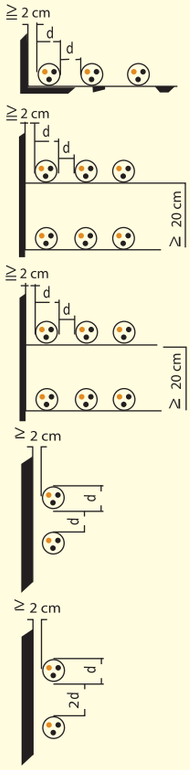
	One Multi-core cabie in each pipe									
	Number of Pipe									
	1	2	3	4	5	6	7	8	9	10
Rating factor	0.82	0.74	0.70	0.67	0.65	0.63	0.62	0.60	0.59	0.58

DEVIATED CONDITIONS FOR AIR:

Rating Factors for Variation of Ambient Temperature for Cables Laid In Air

	Voltage Eo/E kV	Ambient Temperature° C						
		25	30	35	40	45	50	55
Rating factor	0.6/1.0	1.13	1.06	1.00	0.93	0.84	0.76	0.65

Group rating factors for multicore cables laid in air



Multicore cables in air
Arrangement of cables

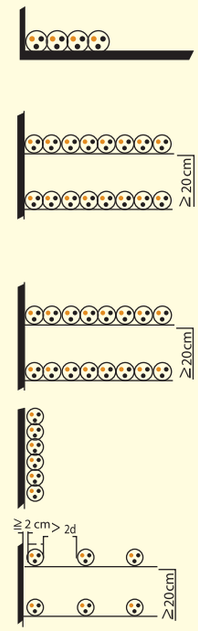
Distance = Cable diameter d
Distance from the wall ≧2 cm

Number of cables side by side		1	2	3	6	9
Laid on the ground		0.95	0.90	0.88	0.85	0.84
	Number of troughs					
Laid on cable troughs (restricted air circulation)	1	0.95	0.90	0.88	0.85	0.84
	2	0.90	0.85	0.83	0.81	0.80
	3	0.88	0.83	0.81	0.79	0.78
	6	0.86	0.81	0.79	0.77	0.76
	Number of racks					
Laid on cable racks	1	1.00	0.98	0.96	0.93	0.92
	2	1.00	0.95	0.93	0.90	0.89
	3	1.00	0.94	0.92	0.89	0.88
	6	1.00	0.93	0.90	0.87	0.86
Number of cables laid one above the other		1	2	3	6	9
Arranged on structures or on the wall		1.00	0.93	0.90	0.87	0.86

Arrangement where reduction of current is not necessary.
This applies only when the cable temperature has no effect on the ambient temperature.

Number of cables laid side by side is not restricted.

Multicore cables in air
Arrangement of cables



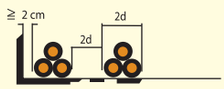
Cables touching each other
Cable in contact with the wall

Number of cables side by side		1	2	3	6	9
Laid on the ground		0.90	0.84	0.80	0.75	0.73
	Number of troughs					
Laid on cable troughs (restricted air circulation)	1	0.95	0.84	0.80	0.75	0.73
	2	0.95	0.80	0.76	0.71	0.68
	3	0.95	0.78	0.74	0.70	0.68
	6	0.95	0.76	0.72	0.68	0.66
	Number of racks					
Laid on cable racks	1	0.95	0.84	0.80	0.75	0.73
	2	0.95	0.80	0.76	0.71	0.69
	3	0.95	0.78	0.74	0.70	0.68
	6	0.95	0.76	0.72	0.68	0.66
Number of cables laid one above the other		1	2	3	6	9
Arranged on structures or on the wall		0.95	0.78	0.73	0.68	0.66

Arrangement where reduction of current is not necessary.
This applies only when the cable temperature has no effect on the ambient temperature.

Number of cables laid side by side is not restricted.

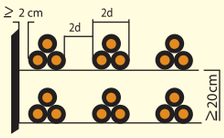
Group rating factors for single-core cables in three phase system in air

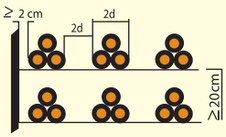


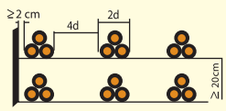
Single-core cable in air, trefoil formation

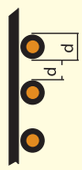
Arrangement of cables — Cables laid in trefoil formation = 2d
Distance from the wall ≥2 cm

		1	2	3
Number of systems laid in flat formation Laid on the ground		0.95	0.90	0.88
	Number of troughs			
Laid on cable troughs (restricted air circulation)	1	0.95	0.90	0.88
	2	0.90	0.85	0.83
	3	0.88	0.83	0.81
	6	0.86	0.81	0.79
	Number of racks			
Laid on cable racks	1	1.00	0.98	0.96
	2	1.00	0.95	0.93
	3	1.00	0.94	0.92
	6	1.00	0.93	0.90









Arrangement where reduction of current is not necessary

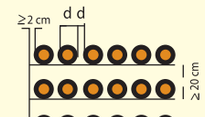
This applies only when the cable temperature has no effect on the ambient temperature.

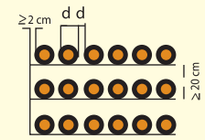
	1	2	3
Number of systems laid one above the other Arranged on structures or on the wall	0.89	0.86	0.84

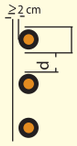
Single-core cable in air, Flat formation

Arrangement of cables — Cables laid in Flat formation = d
Distance from the wall ≥2 cm

		1	2	3
Number of systems Laid on the floor		0.92	0.89	0.88
	Number of troughs			
Laid on cable troughs	1	0.92	0.89	0.88
	2	0.87	0.84	0.83
	3	0.84	0.82	0.81
	6	0.82	0.80	0.79
Laid on cable racks	Number of racks			
	1	1.00	0.97	0.96
	2	0.97	0.94	0.93
	3	0.96	0.93	0.92
	6	0.94	0.91	0.90







	1	2	3
Number of systems laid one above the other arranged on structures or on the wall	0.94	0.91	0.89

CURRENT CARRYING CAPACITY OF CABLES MADE ACCORDING TO IEC 60502-2

DEFINED CONDITIONS :

1. Maximum continuous conductor temperature 90 C
2. Ground temperature 20 ℃
3. Thermal resistivity of soil 100 C. cm/W
4. Ambient Air temperature 30 ℃
5. Depth of laying for direct burial in ground
   a) For cables up to 6/10(12) KV grade 900 mm
   b) For cables up to 8.7/15(17.5) KV grade 1050 mm
6. Type of installation :
   a) Single core cables installed in Trefoil formation
   b) Multicore cables installed singly.

DEVIATED CONDITIONS :

A. CABLES LAID DIRECT IN GROUND

a) Correction factors for variation in ground Temperature :

Ground Temperature (C°)	15	20	25	30	35	40	45
Rating Factor	1.04	1.00	0.96	0.93	0.89	0.85	0.81

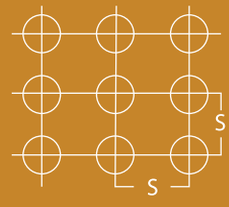
b) Correction factors for variation in Thermal resistivity of soil :

Thermal Resistivity of soil (C°.cm/W)	100	120	150	200	250	300
Rating Factor	1.00	0.94	0.84	0.75	0.68	0.62

c) Correction factors for various depth of Laying :

Depth of Laying (cm)	Up to 6/10 KV	8.7/15 KV
90	1.00	-
105	0.99	1.00
120	0.98	0.99
150	0.96	0.97
180 & above	0.95	0.96

d) Correction factors for grouping of cables :

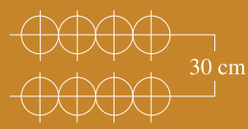
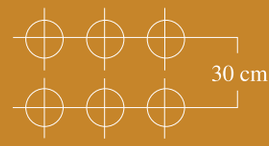
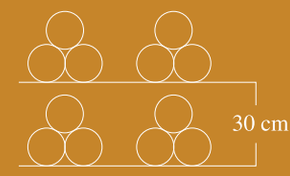
Number of cables/circuits in group	Multicore cables in horizontal formation 			Multicore cables in tier formation 			Multicore cables in trefoil touching formation (Three Cables per circuit) 		
	Touching	s=15 cm	s=30 cm	Touching	s=15 cm	s=30 cm	Touching	s=15 cm	s=30 cm
2	0.79	0.82	0.86	-	-	-	0.78	0.82	0.85
3	0.69	0.72	0.76	-	-	-	0.68	0.71	0.76
4	0.62	0.66	0.72	0.60	0.64	0.69	0.61	0.65	0.71
6	0.54	0.59	0.65	0.51	0.55	0.60	0.53	0.57	0.64

B. CABLES LAID ON RACKS IN AIR

a) Correction factors for variation in ambient Air Temperature :

Ambient Air Temperature (°C)	20	25	30	35	40	45	50
Rating Factor	1.07	1.04	1.00	0.96	0.91	0.86	0.83

b) Correction factors for grouping of cables :

Number of cables/circuits in group	Multicore cables in (touching) 				Multicore cables (Spacing between cables equal to diameter of cable) 				Single core cables in trefoil touching formation spacing between circuit equal to twice the diameter of cable 			
	Number of racks				Number of racks				Number of racks			
	1	2	3	6	1	2	3	6	1	2	3	6
1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2	0.84	0.80	0.88	0.76	0.98	0.95	0.94	0.93	0.98	0.95	0.94	0.93
3	0.80	0.76	0.74	0.72	0.96	0.93	0.92	0.90	0.96	0.93	0.92	0.90
6	0.76	0.71	0.70	0.68	0.93	0.90	0.89	0.87	-	-	-	-

Formula for Electrical Calculation

To Calculate	Given	D. C.	A. C. Singie phase	A. C. 3 phase
Current (A)	KW	$A = \frac{1000 \times KW}{V}$	$A = \frac{1000 \times KW}{V \times p.f.}$	$A = \frac{1000 \times KW}{1.73 \times V \times p.f.}$
Current (A)	KVA		$A = \frac{1000 \times KVA}{V}$	$A = \frac{1000 \times KVA}{1.73 \times V}$
Current (A)	HP	$A = \frac{746 \times HP}{V \times eff.}$	$A = \frac{746 \times HP}{V \times eff. \times p.f.}$	$A = \frac{746 \times HP}{1.73 \times eff. \times p.f. \times V}$
Power (KW)	V. A.	$KW = \frac{A \times V}{1000}$	$KW = \frac{A \times V \times p.f.}{1000}$	$KW = \frac{1.73 \times A \times V \times p.f}{1000}$
Apparent Power (KW)	V. A.		$KVA = \frac{A \times V}{1000}$	$KVA = \frac{1.73 \times A \times V}{1000}$

P.f. = Power factor of equipment or system under consideration.
eff. = efficiency of motor or machinery.
V = line voltage.

Some Useful Rated Current

Average Induction Motor						
Nominal Motor Rating		1 Phase		3 Phase		
		110V	230V	380V	415V	440V
HP	KW	amp	amp	amp	amp	amp
½	0.37	7.8	3.7	1.2	1.1	1.0
¾	0.55	10.4	5.0	1.6	1.5	1.4
1	0.75	13.2	6.3	2.0	1.9	1.8
1½	1.1	19.2	9.2	3.0	2.8	2.6
2	1.5	25.0	12.2	3.9	3.6	3.4
3	2.2	37.0	17.9	5.8	5.3	5.0
5	3.7	59.0	28.0	9.2	8.4	7.9
7½	5.5	84.0	40.0	13.1	11.9	11.3
10	7.5	109.0	52.0	16.8	15.4	14.5
15	11.0	157.0	75.0	24.0	22.0	21.0
20	15.0	-	-	32.0	29.0	27.0
30	22.0	-	-	46.0	42.0	40.0
50	37.0	-	-	75.0	69.0	65.0
75	55.0	-	-	111.0	102.0	96.0
100	75.0	-	-	146.0	134.0	126.0

Pure Resistive Load					
Power	1 Phase			3 Phase	
	110V	230V	380V	415V	440V
KW	amp	amp	amp	amp	amp
1	9.1	4.3	1.5	1.4	1.3
2	18.2	8.7	3.0	2.8	2.6
3	27.3	13.0	4.6	4.2	3.9
4	36.4	17.4	6.1	5.6	5.3
5	45.5	21.7	7.6	7.0	6.6
6	54.6	26.1	9.1	8.4	7.9
7	63.6	30.4	10.6	9.7	9.2
8	72.7	34.8	12.2	11.1	10.5
9	81.8	39.1	13.7	12.5	11.8
10	91.0	43.5	15.2	13.9	13.1
20	182	87.0	30.4	27.9	26.3
40	364	170.0	60.8	55.7	52.5
60	545	261.0	91.3	83.6	78.8
80	727	348.0	122.0	111.0	105.0
100	909	435.0	152.0	139.0	131.0

VOLTAGE DROP FOR LT CABLES (VOLTAGE UP TO 1.0 KV)

Nominal cross-sectiona area	DC - System	Single-phase AC-System	Three-phase AC-System
(mm^2)	(mV/A/m)	(mV/A/m)	(mV/A/m)
1.5	24.2	27.9	24.1
2.5	14.3	17.1	14.8
4	9.0	10.7	9.3
6	6.0	7.2	6.2
10	3.6	4.3	3.7
16	2.3	2.8	2.4
25	1.5	1.8	1.5
35	1.1	1.3	1.1
50	0.8	0.96	0.85
70	0.6	0.70	0.60
95	0.4	0.55	0.45
120	0.3	0.45	0.35
150	0.25	0.35	0.31
185	0.20	0.30	0.26
240	0.15	0.25	0.22
300	0.12	0.22	0.19
400	0.10	0.19	0.17

The voltage drop in a circuit, of which the cable forms a part, should not exceed 3 - 5% of the nominal voltage; e.g. 20.0 volts (5%) for a three-phase 400 volts supply. The above mentioned voltage drop is tabulated for a current of 1 ampere for a 1 metre run. For any cable length, the values need to be multiplied by the length of the cable (in metres) and by the current (in amperes).

Example:

Formula for the calculated voltage drop in mV/A/m:

$$e_{cal} = \frac{\text{permissible voltage drop (e) x 1000}}{\text{current (1) x length (1)}}$$

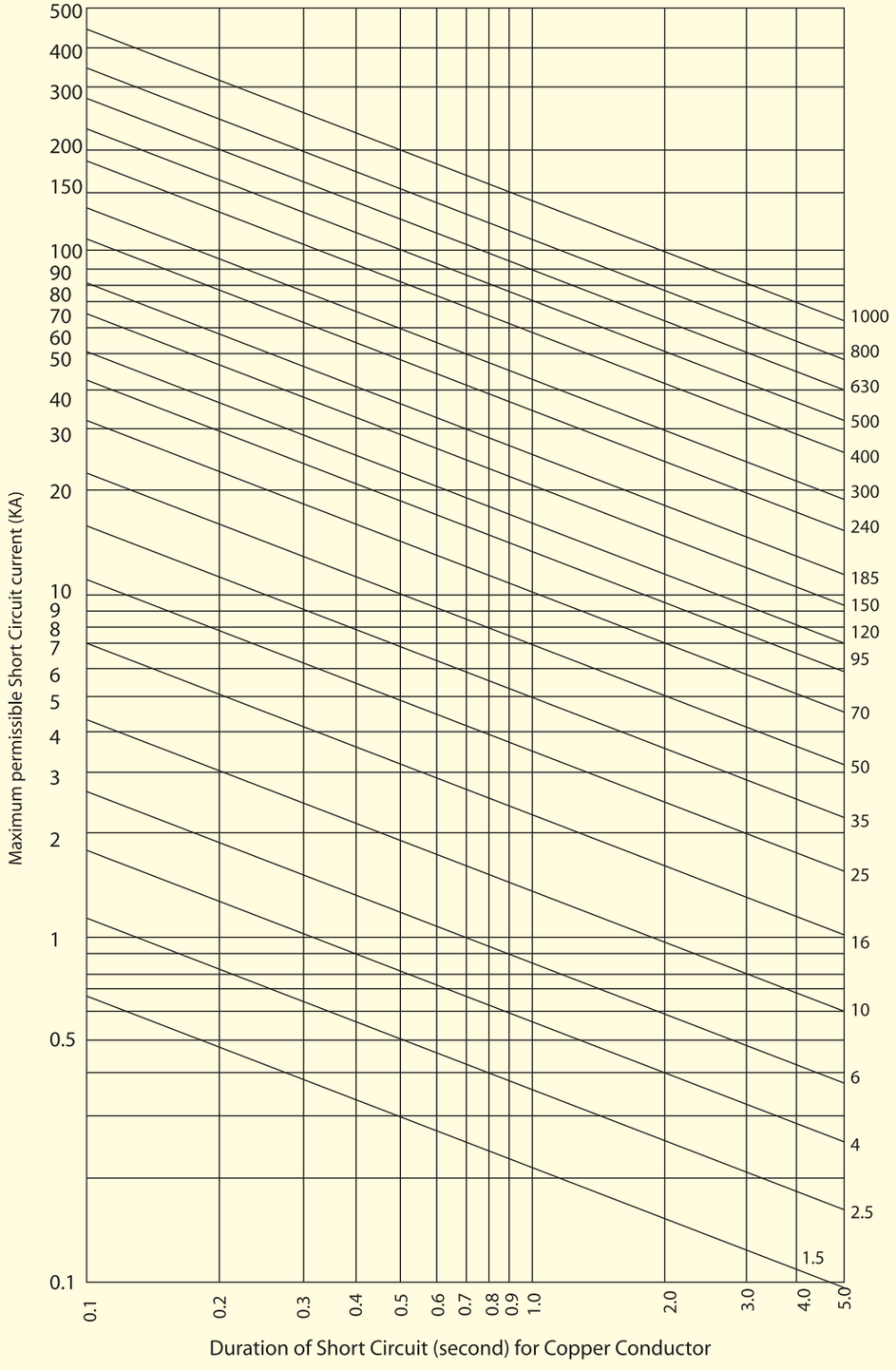
Installation length (L) : 300 m
Current (1) to carry : 80 A
Nominal voltage (U) : 400 V (Three-phase AC)
Permissible voltage drop (e) : 20.0 V (5% of 400 V)

$$e_{cal} = \frac{20.0\text{V x } 1000}{80\text{ A x } 300\text{ m}} = 0.83\text{ mV/A/m}$$

Select a cross-section, such that the voltage drop is equal to or less than 0.83 mV/A/m from above table. It has to be ensured that the selected cross-section will carry the current. The corresponding cross-section will be 50mm2.

SHORT CIRCUIT CURRENT FOR XLPE CABLES (COPPER CONDUCTOR)

Curves are based no:
* Cables was at maximum operating temperature of 90˚C at the start of short-circuit.
* Final conductor temperature of 250˚C



Conductor size (mm^2)	Shortcircuit current (1s) (KA)
1.5	0.214
2.5	0.36
4	0.57
6	0.86
10	1.43
16	2.29
25	3.58
35	5.01
50	7.15
70	10.02
95	13.59
120	17.17
150	21.46
185	26.47
240	34.34
300	42.92
400	57.23
500	71.54
630	90.14
800	114.46
1000	143.08

$$Isc = 0.143 \sqrt{\frac{A}{t}}$$

Where,

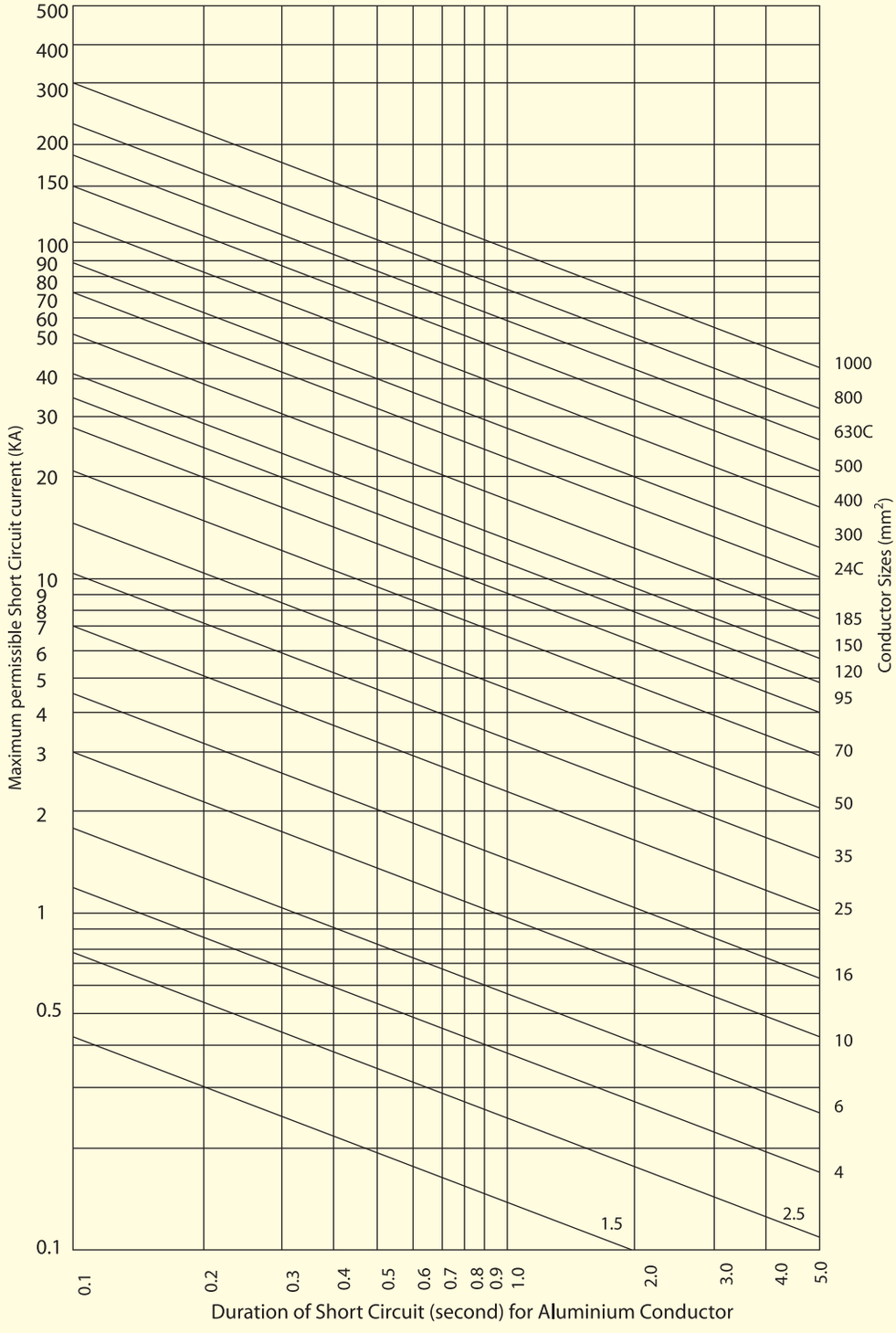
Isc = Short circuit Current in KA

A = Conductor size inmm^2

t = Short circuit duration in sec.

SHORT CIRCUIT CURRENT FOR XLPE CABLES (ALUMINIUM CONDUCTOR)

Curves are based no:
* Cables was at maximum operating temperature of 90°C at the start of short-circuit.
* Final conductor temperature of 250°C



Conductor size (mm^2)	Shortcircuit current (1s) (KA)
1.5	0.14
2.5	0.24
4	0.38
6	0.57
10	0.94
16	1.51
25	2.36
35	3.31
50	4.72
70	6.61
95	8.98
120	11.34
150	14.17
185	17.48
240	22.64
300	28.34
400	37.79
500	47.24
630	59.52
800	75.58
1000	94.48

$$Isc = 0.094 \sqrt{\frac{A}{t}}$$

Where,

Isc = Short circuit Current in KA

A = Conductor size in mm^2

t = Short circuit duration in sec.

PHYSICAL & ELECTRICAL PROPERTIES OF COPPER & ALUMINIUM

	Property	Unit	Copper		Aluminium	
			Hard-drawn	Annealed	Hard-drawn	Annealed
Physical properties	Melting point	°C	1083	1083	658	658
	Density	gm/cm^3	8.89	8.89	2.703	2.703
	Tensile strength	kg/mm^2	34-47	20-28	15-20	7-14
	Co-efficient of liner expansion	/°C	17 x10^{-6}	17 x10^{-6}	23 x 10^{-6}	23 x10^{-6}
	Thermal Conductivity	W/°C.cm	3.86	3.86	2.39	2.39
	Specific heat	J/°C.cm^3	3.4	3.4	2.4	2.4
Electrical properties	Electrical Resistivity at 20°C	ohm-mm^2 /m	0.017770	0.017241	0.02873	0.02820
	Electrical Conductivity at 20°C	% IACS	97	100	60	61
	Temperature Co-efficent of resistance at 20°C, per unit of cons. Mass	-	0.00393	0.00393	0.00103	0.00403

COMPARISON OF COPPER & ALUMINIUM CONDUCTORS

Particulars	Aluminium Annealed EC grade Take annealed Copper as 100%	Copper (Annealad) Take annealed Aluminium as 100%
	%	%
For equal Cross sectional area and length		
Weight	30	329
Resistance	164	61
Breaking load (Approx.)	41	244
For equal weight and length		
Area	329	30
Diameter	180	55
Resistance	50	200
Breaking load (Approx.)	137	73
For equal resistance		
Area	164	61
Diameter	128	78
Weight	50	200
Breaking load (Approx.)	68	147
For equal current and temperature rise		
Weight	42	237
Diameter	119	84

ADVANTAGES OF XLPE INSULATED CABLES

1. Does not soften beyond the normal range of conductor operating temperatures and is called THERMOSETTING insulation.
2. Due to greater capacity to withstand heat, the permissible maximum continuoous conductor operating temperature is 90° C and for momentary short circuits the permissible temperature is 250°C.
3. Higher strength and superior mechanical properties allow lower insulation thinkness. The insulation resistance value of the cable does not apperciably change with conductor operating temperature.
4. XLPE insulation dissipates heat from conductors much faster as its thermal resistivity is 3.5°C m/W.
5. Heat generation in the insulation itself is low due to very low "loss angle".
6. Due to the foregoing reasons. an XLPE cable can carry 15% to 30% higher current than a PVC cable with the same conductor size.
7. Density of XLPE is 0.92 to 0.94 gm/ml and due to lower insulation thickness, XLPE insulated cables are lighter and easier to install.
8. Jointing and terminating of XLPE insulated cables does not require any special techniques.

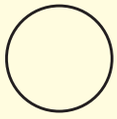
XLPE Versus PVC - COMPARATIVE PROPERTIES SUMMARY

PROPERTIES	XLPE	PVC
1. Chermical Structure	Thermosetting Plastic	Thermoplastic
2. Polymer Structure	Partical Crystalline	Amorphous
3. Temperature Rating (°C) a) Operating b) Emergency overioad c) Short Circuit	 90 130 250	 70 90 160
4. Cable Installation Job	Easy due to lesser weight. less diameter and lesser bending radius.	-
5. Current Carring Capacity	30% Higher than PVC	-
6. Dielectric Strength (KV/mm)	550	350
7. Volume Resistivity (ohm-cm)	10^{14}	10^{13}
8. Thermal Resistivity (°C /cm/watt)	350	730
9. Dielectric Loss factor (at 50 Hx & 20°C)	0.0004	0.50 to 0.07
10. Low Temperature Brittleness (°C)	-40	-15
11. Moisture Resistance	Excellent	Good
12. Oil Resistance	Excellent	Fair
13. Solvent Resistance	Excellent	Poor
14. Acid Resistance	Excellent	Fair
15. Alkali Resistance	Excellent	Good

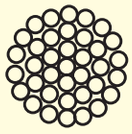
Mechanical, Thermal and Electrical properties of Insulation Materials

Sym bols	Materials	Permissible operating temperature	mechanical			thermicla			eletrical		
			tensile strength	elongation	resistance to abrasion	behaveiour at low temperatures	flame resistance	emission of corrosive gases during a combussion	specific volume resistivity (Ω-cm)	permittivity constant (ep)	factor of loss
PVC	polyviny chloride compound	70-105	12.5-25	125-350	average to good	moderate to good	average to good	hydrogen chloride	10^{12} 10^{15}	4.0-6.5	10^{-2}-10^{-3}
LDPE	Low-density polyethylene	70.00	10.20	400-600	average to good	good	bad	-	$>10^{16}$	2.25-2.6	-10^{-4}
HDPE	high-density polyethylene	90.00	25.40	500-1000	good average	good	bad	-	$>10^{16}$	24.25	-10^{-4}
XLPE	cross-linked polyethylene	90.00	12.5-20	300.450	to good	good	bad	-	$>10^{16}$	23.26	-10^{-4}

CONSTRUCTION FOR VARIOUS TYPE OF CONDUCTORS

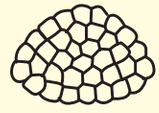


circular
solid
RE



circular
stranded
RM

circular
stranded
compacted
RM



sector-shaped
stranded
SM

Nominal Cross Sectional Area	Max.Conductor Resistance at 20°C		NON COMPACTED CONDUCTOR		COMPACTED CONDUCTOR			SECTOR SHAPED CONDUCTOR	
			No. & nominal diameter of wire	Nominal Conductor diameter	No.of wire in Conductor Cu/Al	Conductor diameter		No.of wire in Conductor Cu/Al	Nominal Conductor Depth
	Cu	Al			(Min.)	(Min.)	(Max.)	(Min.)	3C/4C
mm^2	Ohm/km	Ohm/km	no./mm	mm	no.	mm	mm	no.	mm
1.0	18.1	-	1/1.13	1.13	-	-	-	-	-
1.0	18.1	-	3/0.65	1.40	-	-	-	-	-
1.5	12.1	-	1/1.38	1.38	-	-	-	-	-
1.5	12.1	18.1	7/052	1.56	-	-	-	-	-
2.5	7.41	-	1/1.78	1.78	-	-	-	-	-
2.5	7.41	12.1	7/067	2.01	-	-	-	-	-
4	4.61	7.41	7/0.85	2.55	-	-	-	-	-
6	3.08	4.61	7/1.04	3.12	-	-	-	-	-
10	1.83	3.08	7/1.35	4.05	-	-	-	-	-
16	1.15	1.91	7/1.70	5.10	-	-	-	-	-
25	0.727	1.20	7/2.14	6.42	-	-	-	-	-
35	0.524	0.868	19/1.53	7.65	6	6.6	7.5	6	5.6/6.6
50	0.387	0.641	19/1.83	9.15	6	7.7	8.6	6	6.6/7.2
70	0.268	0.443	19/2.17	10.85	12	9.3	10.2	12	7.9/9.3
95	0.193	0.320	19/2.52	12.60	15	11.0	12.0	15	9.4/10.5
120	0.153	0.253	37/2.03	14.21	18/15	12.3	13.5	18/15	10.7/11.7
150	0.124	0.206	37/2.27	15.89	18/15	13.7	15.0	18/15	11.9/12.6
185	0.0991	0.164	37/2.52	17.64	30	15.3	16.8	30	12.8/14.4
240	0.0754	0.125	61/2.25	20.05	34/30	17.6	19.2	34/30	14.9/16.1
300	0.0801	0.100	61/2.52	22.68	34/30	19.7	21.6	34/30	16.5/18.6
400	0.0470	0.0778	61/2.89	26.01	53	22.3	24.6	53	19.5/21.6
500	0.0366	0.0605	61/3.23	29.07	53	25.3	27.6	-	-
630	0.0283	0.0469	127/2.52	32.76	53	28.7	32.5	-	-
800	0.0221	0.0367	127/2.85	37.05	53	32.6	36.7	-	-
1000	0.0176	0.0291	127/3.20	41.60	53	36.3	40.5	-	-

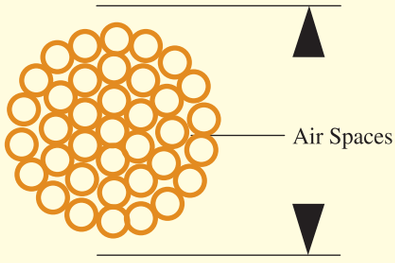
Diference Between Stranded circular conductor and stranded compact circular conductor

In the world of electrical conductors there are several style that are used by electric utilities. The two common types of stranding that are using for power Cable. 1) Round wire conductor 2) Compact Conductor

Round wire conductor is the most common configuration that is used for bare conductor and insulated cable is made up of a number of the same size round wire that are cabled together (see Figure 1). This construction adds flexibility to the conductor, but the resulting air spaces that are introduced between the individual strands results in an overall increase in diameter of Cable.

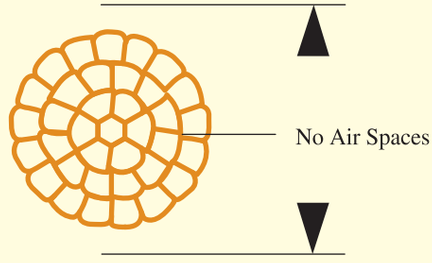
The first of the diameter reduction would be what is classified compact conductor.The individual strands of the conductor to reduce the total stranded diameter approximately 4% to 8% from the original diameter of the round wire conductor (see Figure2). this type of conductor have no air spaces that are introduced between the individual strands. Compact conductor is made from EC grade scratch free and ensure excellent conductivity minimized electrical stress.

Figure 1



Concentric Round

Figure 2



Compact

ABOUT CABLE LUGS

Compacted Conductors have a smaller diameter compared to standard stranded conductors, but their nominal cross sectional area is equivalent and a lug designated for thesame cross sectional area must be used on the compacted conductor. Even though the lug will appear to fit more loosely, when crimped in accordance with the lug manufacturer's recommendations, the end result is the equivalent to the crimping of a standard conductor. Compacting the conductor by the cable manufacturer is just the action of pushing all the wires together, getting rid of the air gaps, ahead of time.

The general practice is for lug manufacturer's to manufacture a range of lug sizes that suits both the compacted and stranded conductors. However, if there are any concerns, please consult your lug manufacturer.

Measurement Comparison in Various System

Gauge System		Diameter		Cross Section Area			Weight of Copper
A. W. G	S. W. G	mm	mil	mm^2	$inch^2$	CM	kg /km
6/0	-	14.73	580	170.46	0.2642	336400	1515.4
5/0	-	13.11	516	134.92	0.2091	266156	1199.4
-	7/0	12.70	500	126.68	0.1964	250000	1126.2
-	6/0	11.79	464	109.09	0.1691	515296	969.8
4/0	-	11.68	460	107.22	0.1662	211600	953.2
-	5/0	10.97	432	94.56	0.1466	186624	840.7
3/0	-	10.41	410	85.16	0.1320	168100	757.7
-	4/0	10.16	400	81.70	0.1256	160000	720.7
-	3/0	9.449	372	70.12	0.1087	138384	623.4
2/0	-	9.271	365	67.51	0.1046	133255	600.1
-	2/0	8.839	348	61.36	0.09512	121104	545.5
0	-	8.255	325	53.52	0.08796	105625	475.8
-	-	8.230	324	53.19	0.08245	104976	472.9
-	1	7.620	300	45.60	0.07059	90000	405.4
1	-	7.341	289	42.22	0.06560	83521	376.2
-	2	7.010	276	38.60	0.06983	76176	343.71
2	-	6.553	258	33.94	0.05228	66564	299.8
-	3	6.401	252	32.18	0.04988	63504	286.1
-	4	5.893	232	27.27	0.04227	53824	242.5
3	-	5.817	229	26.57	0.04119	52441	236.2
-	5	5.385	212	22.77	0.03530	44944	202.5.
4	-	5.182	204	21.09	0.03269	41616	187.5
-	6	4.877	192	18.68	0.02895	36864	166.1
5	-	4.623	182	16.78	0.02602	33124	149.2
-	7	4.470	176	15.70	0.02433	30976	139.5
6	-	4.115	162	13.30	0.02064	26244	118.2
-	8	4.065	160	12.97	0.02011	25600	115.3
7	9	3.658	144	10.507	0.01629	20736	93.41
8	10	3.251	128	8.302	0.01287	16384	73.80
-	11	2.948	116	6.818	0.01057	13456	60.61
9	-	2.896	114	6.585	0.01021	12996	58.54
-	12	2.642	104	5.480	0.008495	10816	48.72
10	-	2.591	102	5.272	0.008171	10404	46.87
-	13	2.337	92	4.284	0.006648	8464	38.08
11	-	2.311	91	4.196	0.006504	8281	37.30
12	-	2.057	81	3.325	0.005153	5661	29.55
-	14	2.032	80	3.243	0.005027	6400	23.35
13	15	1.828	72	2.627	0.004072	5184	23.85
14	16	1.626	64	2.075	0.003217	4096	18.45
15	-	1.448	57	1.646	0.002552	3249	14.64
-	17	1.422	56	1.589	0.002463	3136	14.13
16	-	1.295	51	1.318	0.002043	2601	11.72
-	18	1.291	48	1.168	0.001810	2304	10.38
17	-	1.143	45	1.026	0.001590	2025	9.122
18	19	1.016	40	0.8107	0.001257	1600	7.207
19	20	0.9144	36	0.6567	0.001018	1296	5.838
20	21	0.8128	32	0.5189	0.0008043	1024	4.613
21	-	0.7239	29	0.4156	0.0006379	810	3.695
-	22	0.7112	28	0.3973	0.0006158	784	3.532
22	-	0.6428	25	0.3243	0.0005027	640	2.883
-	23	0.6096	24	0.2919	0.0004524	576	2.595
23	-	0.5733	23	0.2588	0.0004013	509	2.301
-	24	0.5588	22	0.2453	0.0003801	484	2.181
24	-	0.5105	21	0.2047	0.0003173	404	1.82
-	25	0.5080	20	0.2021	0.0003142	400	1.797

Measurement Comparison in Various System

Gauge System		Diameter		Cross Section Area			Weight of Copper
A. W. G.	S. W. G.	mm	mil	mm^2	$inch^2$	CM	kg/km
-	26	0.4572	18.0	0.1642	0.0002545	324.0	1.460
25	-	0.4547	17.9	0.1624	0.0002516	320.4	1.443
26	-	0.4639	15.9	0.1281	0.0001986	2528	1.139
-	27	0.4166	16.4	0.1363	0.0002118	268.9	1.212
-	28	0.3759	14.8	0.1110	0.0001720	219.0	0.9868
27	-	0.3607	14.2	0.1022	0.0001584	201.6	0.9083
-	29	0.3454	13.6	0.09372	0.0001453	184.9	0.8332
28	-	0.3211	12.6	0.08042	0.0001247	158.8	0.7149
-	30	0.3150	12.4	0.07791	0.0001203	153.8	0.7032
-	31	0.2946	11.6	0.05818	0.0001057	136.6	0.6061
29	-	0.2859	11.3	0.06470	0.0001003	127.7	0.5752
-	32	0.2743	10.8	0.05910	0.00009161	116.6	0.5254
30	33	0.2540	10.0	0.05067	0.00007854	100.0	0.4506
-	34	0.2337	9.2	0.04289	0.00006648	84.64	0.3813
31	-	0.2261	8.9	0.04041	0.00006221	79.21	0.3568
-	35	0.2134	8.4	0.03515	0.00005542	70.56	0.3125
32	-	0.2019	7.9	0.03203	0.00004964	63.21	0.2847
-	36	0.1930	7.6	0.02927	0.00004537	57.76	0.2602
33	-	0.1803	7.1	0.02555	0.00003959	50.41	0.2271
-	37	0.1727	6.8	0.02348	0.00003632	46.20	0.2087
34	-	0.1601	6.3	0.02010	0.00003117	39.69	0.1788
-	38	0.1524	6.0	0.01824	0.00002827	36.00	0.1622
35	-	0.1422	5.6	0.01587	0.00002463	31.86	0.1413
-	39	0.1321	5.2	0.01370	0.00002124	27.04	0.1218
36	-	0.1270	5.0	0.01267	0.00001964	25.00	0.1126
-	40	0.1219	4.8	0.01167	0.00001810	23.04	0.1038
37	-	0.1131	4.5	0.01005	0.00001557	19.83	0.08931
-	41	0.1118	4.4	0.00981	0.00001521	19.36	0.08721
38	42	0.1016	4.0	0.008107	0.00001257	16.00	0.07207
-	43	0.0914	3.6	0.006567	0.00001018	12.96	0.05838
39	-	0.0889	3.5	0.006207	0.000009621	12.25	0.05518
-	44	0.0813	3.2	0.005189	0.000008043	10.24	0.04613
40	-	0.0787	3.1	0.004870	0.000007548	9.61	0.04329
41	45	0.0711	2.8	0.003970	0.000006158	7.84	0.03529
42	-	0.0635	2.5	0.003167	0.000004909	6.25	0.02815
-	46	0.0610	2.4	0.002922	0.000004524	5.76	0.02593
43	-	0.0559	2.2	0.002454	0.000003801	4.48	0.02182
44	47	0.0508	2.0	0.002027	0.000003142	4.00	0.01802
45	-	0.0447	1.8	0.001569	0.000002433	3.10	0.01895
-	48	0.0406	1.6	0.001295	0.000002011	2.56	0.01150
46	-	0.0399	1.57	0.001250	0.000001936	2.46	0.01111
47	-	0.0356	1.40	0.0009954	0.000001539	4.96	0.008849
48	-	0.0315	1.24	0.0007793	0.000001208	1.54	0.006928
-	49	0.0305	1.20	0.0007306	0.000001131	1.44	0.006495
49	-	0.0282	1.11	0.0006246	0.0000009677	1.23	0.005563
-	50	0.0254	1.00	0.0005056	0.0000007854	1.00	0.004503
50	-	0.0251	0.99	0.0004948	0.0000007698	0.980	0.004399

Note :
1 mil = 0.001 inch
S.W.G. = British Standard Wire Gauge
A.W.G. = American Standard Wire Gauge
1 CM = 0.7854×10^{-4} in^2
1 CM is the area of a circle of 1 mil diameter

CABLE PARAMETERS CALCULATION GUIDE

1. NOMINAL VOLTAGE

The Nominal voltage is to be expressed with two values of alternative current Uo/U in V (volt):

Uo/U : phase to earth voltage
Uo : Voltage between conductor and earth
U : Voltage between phases (conductors)

2. RESISTANCE

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

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

= 0.00393 for copper
= 0.00403 for aluminum

Generally DC resistance is based on IEC 60228 to calculate AC resistance of the conductor at the operating temperature as the following:

RAC = Rt x [1 + ys +yp]
ys : skin effect factor
yp : proximity effect
Generally AC resistance is based on IEC 60287

3. CAPACITANCE

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

C : Operating capacitance µF/KM
D : Diameter over insulation mm
d : Conductor diameter mm
€r : Relative permittivity of insulation material
€r = 4.8 for PVC
€r = 2.3 for XLPE

4. INDUCTANCE

$L = K + 0.2 \ln (2s/d)$ (mH/km)
L : Inductance (mH/km)
K : Constant depends on number of wires of conductor
d : Conductor diameter
S : Axial spacing between cables (Trefoil formation)
S : 1.26 x axial specing between cables (Flat formation)

5.REACTANCE

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

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

6. IMPEDANCE

$$Z = \sqrt{R^2_{ac} + X^2} \quad \Omega/km$$

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

CABLE PARAMETERS CALCULATION GUIDE

7. INSULATION RESISTANCE

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

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

8. CHARGING CURRENT

$I = U_{\circ} \times 2\pi f \times C \times 10^{-6}$

I : Charging current	A/km
$U_{\circ}$: voltage between phase and earth	v
C : Capacitance to neutral	µF/km

9. DIELECTRIC LOSSES

$D = 2 \pi f C U_o^2 \tan \delta 10^{-6}$	watt/km/phase
D : Dielectric losses	watt/km/phase
$U_{\circ}$: Voltage between phase and earth	V
C: Capacitance to neutral	µF/km
tan δ : Dielectric power factor	

10. CABLE SHORT CIRCUIT CAPACITY

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

11. VOLTAGE DROP

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

1- for single phase circuit:
$Vd = 2Il (R \cos Ø + X \sin Ø)$
2- for three phase circuit :
$Vd = \sqrt{3}Il (R \cos Ø + X \sin Ø)$

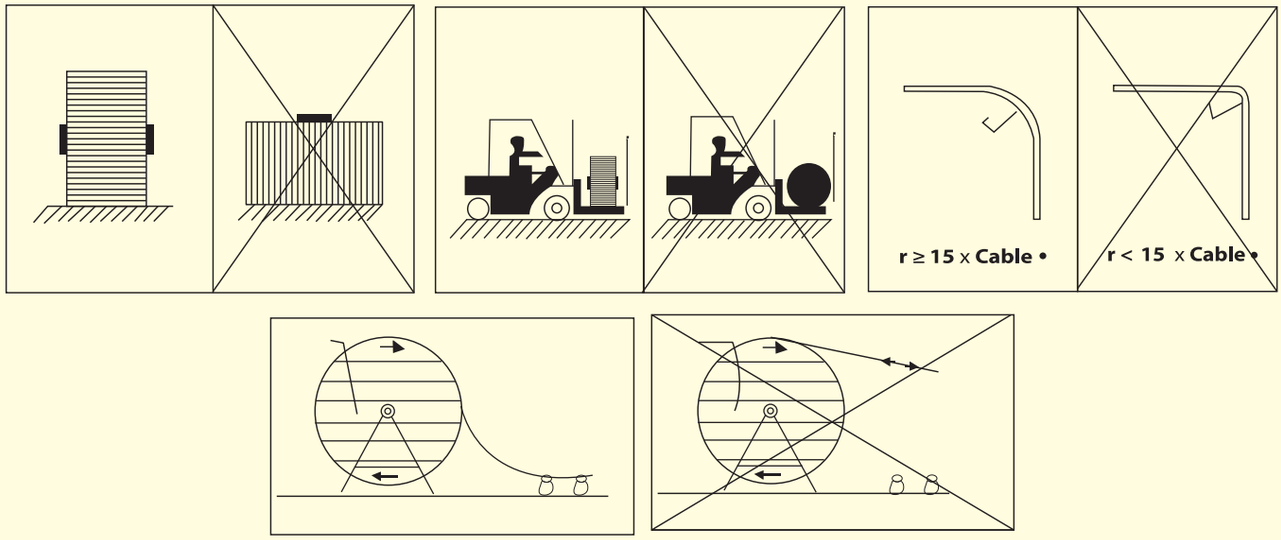
Vd: Voltage drop	V
I : Load current	A
R : AC resistance	Ω/km
X : Reactance	Ω/km
1 : Length	km
cos Ø : Power factor	

-Retation between cos Ø and sin Ø as following:

cos Ø 1.0	0.9	0.8	0.71	0.6	0.5
sin Ø 0.0	0.44	0.6	0.71	0.8	0.87

USERS' GUIDELINE

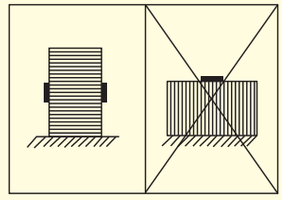
(Handling of Cables and Drums)



DRUMS HANDLING

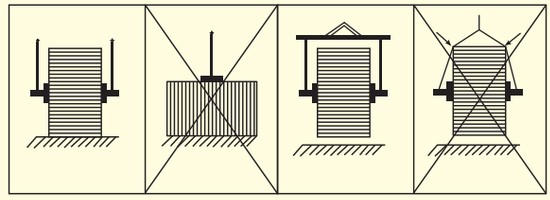
1.1 Position of Drums:

Drums must be handled only in the upright position, not on the flanges.



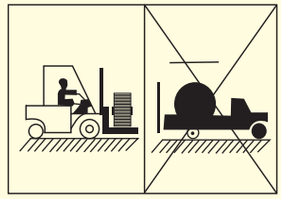
1.2 Loading:

Drums must be lifted only with mandrel or a chain through the central hole. It is important to use a spacing bar to leave a gap between the chain and the flanges of the drum. Do not lift more than one drum if its diameter is equal to or greater than 1.2 meters.



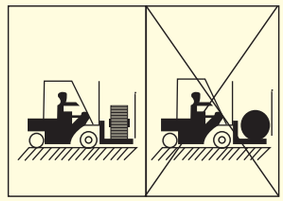
1.3 Unloading:

When unloading from vehicles (truck, ship, wagon etc.) the correct lifting grar must be used (forklift, truck. crane, etc.). Never drop drums, even from a small height.



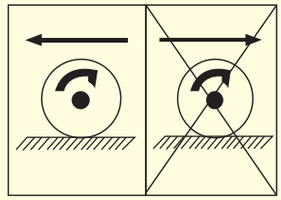
1.4 Handling by forklift:

If a forklift is used, always cradle both drum flanges between the forks. The forks must not brar on the unsupported laggings between flanges.



1.5 Rolling:

Drums are permitted to be rolled for short distances, the ground being smooth and free of injurious impediments, but only in the opposite direction of the arrow painted on flanges. If arrow sign is missed, drums may be rolled but only in the direction to cable winding, to keep cable from loosening the drum.



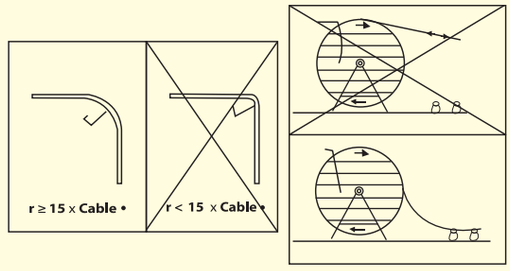
1.6 Paying-off the Cable:

When paying off a cable from a drum;

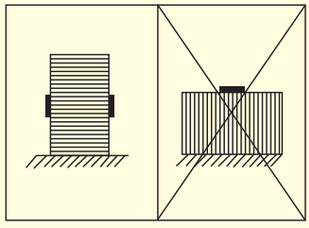
1) The lower end of the cable should be free.

2) Drums should be unreeled without exceeding the maximum allowed pulling force of the cable.

3) The minimum bending radius of the cable should be equal to or

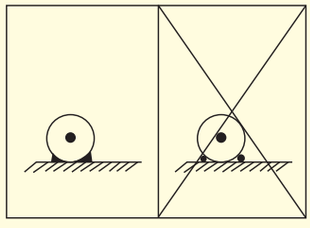


TRANSPORT REQUIREMENTS



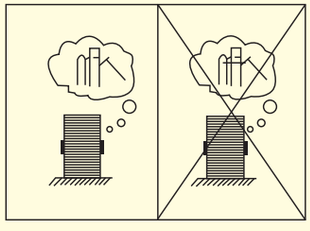
2.1 Position of the Drums:

Drums must be transported only in the upright position, not on the flanges. Never allow an unauthorized person to operate any lifting device or a mechanical transport.



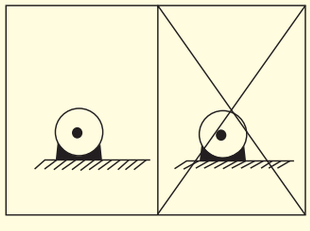
2.2 Fastening Drums:

Wedges must be used to retain drums. Wedges must be positioned at flanges' edges and not between flanges. The use of stones is forbidden. Where the load is unusual and is likely to need special care, ensure that all precautions are properly checked before the transport is allowed to move.



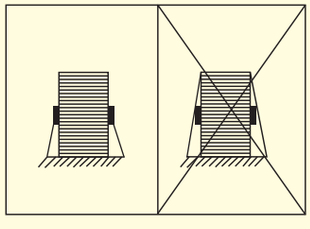
2.3 Use of Nails:

When nails are used to fasten drums on vehicles, be sure that the length of the nail is less than the thickness of the flange.



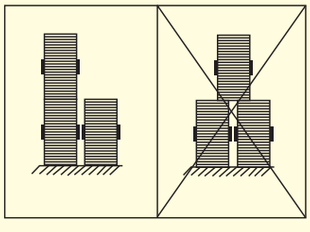
2.4 Larger Drums:

Drums with diameter greater than 1.6 meters must be supported by wedges and must not touch the vehicle's floor. Never use a lifting device or transport device for a weight which exceeds its permitted capacity.



2.5 Binding of the Drums:

Binding must be made with ropes crossing through the central hole and, if necessary, on the drum flanges. Binding with ropes only crossing the drum's edges is strictly forbidden.

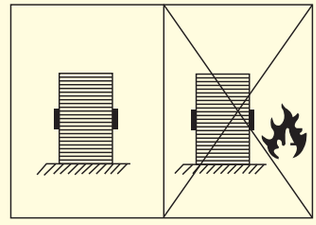


2.6 Multiple Drums Storage:

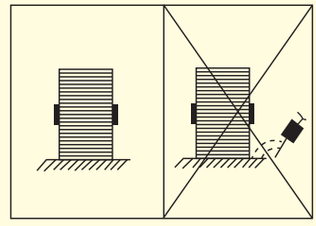
Multiple drum storage, either double or single layer must be obtained with flange to flange contact. Flanges contacting to unsupported part of lagings are forbidden.

STORAGE REQUIREMENTS

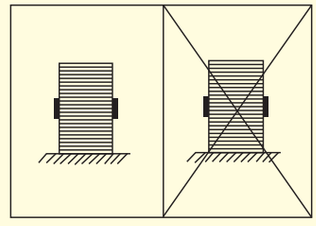
3.1 Do not store near heat sources.



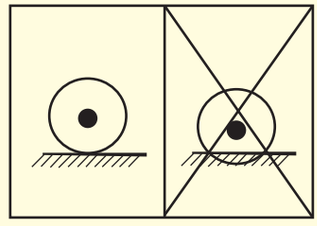
3.2 Do not store on vibrating surfaces. (Ship engine room etc.)



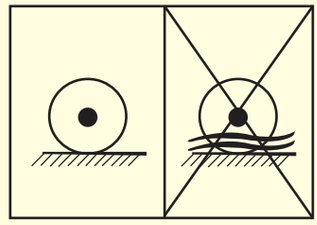
3.3 Do not store on irregular surfaces.



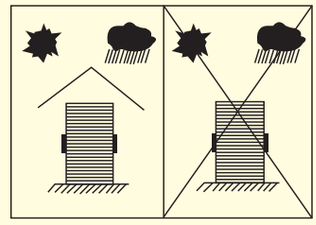
3.4 Do not store on soft surfaces.

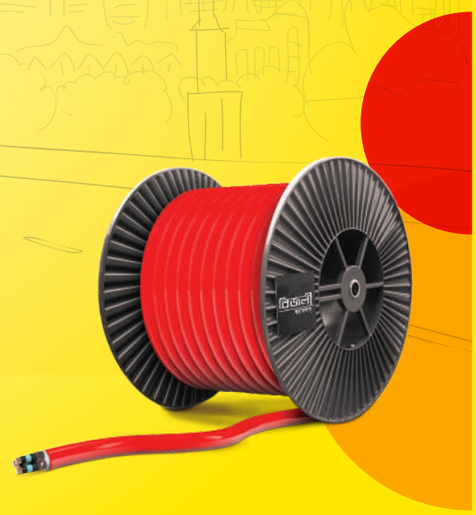


3.5 Do not store on areas liable of flooding. All cable ends must be fully sealed at all times to prevent the ingress of water. It is preferable to store reels off the ground on timbers or other supports. In damp locations, it is advisable to allow at least 3 inches between reels to permit circulation of air.



3.6 If storage is likely to last more than 6 months, drums should be stored in order to be protected from effects like rain, sunlight etc.





BIZLI CABLES

হেড অফিস: প্রাণ-আরএফএল সেন্টার, ১০৫ প্রগতি সরণি, মধ্য বাড্ডা, ঢাকা ১২১২, ফোন: ৮৮-০২-৯৮৮১৭৯২
প্রস্তুতকারক: বঙ্গ বিল্ডিং ম্যাটেরিয়ালস্ লিঃ, অলিপুর, শাহ্জিবাজার, শায়েস্তাগঞ্জ, হবিগঞ্জ
যোগাযোগ: ০১৯২৪ ৬০৯ ৪০০, কাস্টমার কেয়ার: ০৯৬১ ৩৭৩৭ ৭৭৭