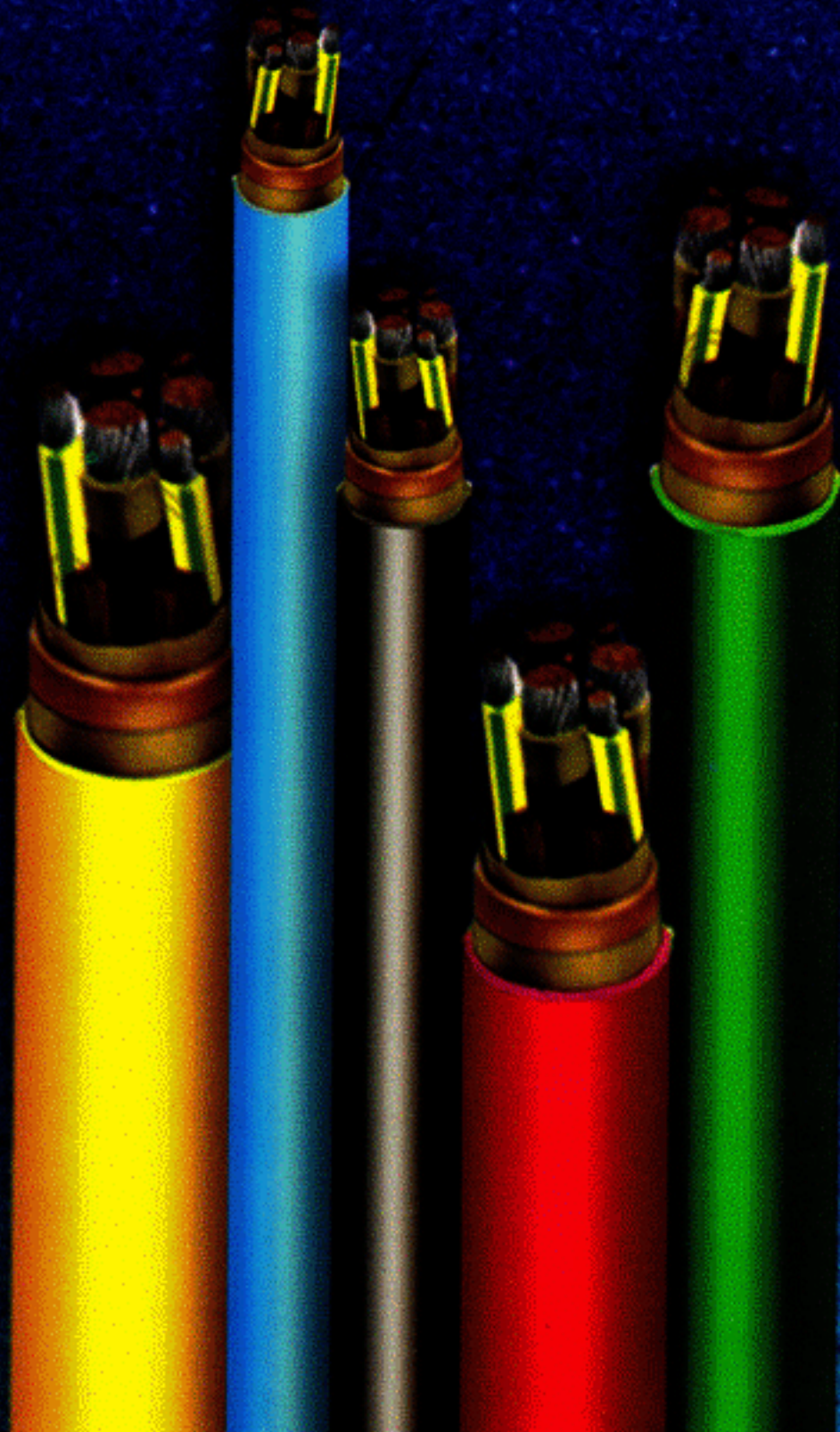


SELCOPLAST CABLES CO. (S.A.E.)



Selcoplast Cables company (S.A.E)

PVC INSULATED CABLES

Head Off.: 39, Kasr El-Nile St.,
Cairo Egypt
Tel.: 3924427 - 3935486
Fax : 3932268

Sales Off.: 1 El-sheikh Edriss St.,
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Factory : Industrial Zone - B4
10 Of Ramadan City
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Fax : 015 / 365080

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2. ABOUT SELCOPLAST CABLE COMPANY.

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* MATERIALS & CONDUCTORS.

* ORDERING ADVICE.

SELCOPLAST

Certificate

The certification body of the DaimlerChrysler Aerospace AG

Dasa-Zert

confirms hereby that

Selcoplast Cables Company (S.A.E.)

10th of Ramadan Industrial City Zone B
Egypt

has installed and applies a quality system especially for producing
**all types of solid and stranded copper conductors,
insulated and sheathed wires and cables.**

On the basis of an audit conducted by Dasa-Zert it is hereby certified
that this quality system satisfies
the requirements of the following standard

EN ISO 9001

Quality Systems

**Model for Quality Assurance in Design/Development,
Production, Installation and Servicing.**

This certificate is valid until

7th August 2002

Certificate registration No.

EZ - 0899-1

Munich, on the **15th** day of

August 1999

Werner Eder
Head of Business Office

S. Muntz



Dasa-Zert, D-81663 München

ABOUT SELCOPLAST CABLES CO (S. A. E.)

The pioneer of cables industrialization in Egypt

Founded in 1977 Selcoplast Cables Co. is an independent manufacturer of electrical Copper conductors; stranded, multi-conductors and flexible control cables, PVC Insulated, sheathed

Situated in Egypt's new industrial city, Tenth of Ramada, over 6000 sq. m. and equipped with the latest in wire making technology the plant is one of the most advanced in the Egyptian wire industry

By installing new equipment and through a continuous upgrade of existing machinery the company has been able to maintain its excellence in providing the market with the best quality and enhanced product range

The plant incorporates manufacturing, material testing and electronic data processing facilities that provides the customer with the most reliable, high quality product possible Through a nation wide network of representatives providing even the most remote customer with a local contact, Selcoplast has successfully established an efficient delivery and support strategy that satisfies even the most demanding customer

Selcoplast is geared to provide a quick and responsive support to customers regarding orders as well as inquiries related to pricing, delivery and technical assistance

For a representative in your area, call the Sales Office :

1, El Sheikh Edriss St., Sharabeya.

Tel. : (202) 2355416 - 2356917

Fax : (202) 2338137

E-mail : selco@link.com.eg

Web site : www.selcoplast.com

Selcoplast Cables CO., has developed its quality system to cover all requirements of ISO 9001, and received the certificate from DAZA ZERT,GERMANY, after a throughly conducted auditing procedure of the company quality system with its proper implementation.

SELCOPLAST CABLES CO., STRATEGY :

- * Planing for growth and quality assurance.
- * Enhancing the capabilities of its manpower of competent utilization of their credibility.
- * Aggressive market plans and activities.
- * Exploring high technology and complementry industries.
- * Competent improvement of the operation economies for retaining or competitive position in local market as well as major development of Exports.
- * Full scale customs support & technical assiss.

Eng. Magdy Mounir
C.E.O.

**S
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TECHNICAL INFORMATION

The three fundamental requirements of any energy cable, are, quite simply:

1. Performance capability.
2. Long term reliability.
3. Safety.

Cables must perform to the current carrying limits for which they are designed yet be equal to the environmental conditions to which they are exposed.

The continued and increasingly exacting needs of modern commercial and industrial activities demand a high level of technological resource, research an investment.

Selcoplast Cables CO., With more than 20 years of experience in this field, has earned an enviable reputation for innovation and excellence. Its well known activities in the electrical and construction industries reflect total capability and understanding of the problems associated with power distribution.

High standards have been set by the electrical industry in both manufacturing and application practices, dedicated to maintaining equally high levels of performance capability and consumer safety.

Technical Advisory Service

Specialist advice on all matters concerning PVC insulated power cables is available from the Selcoplast sales team (Sales off) or direct from

SELCOPLAST CABLES CO . (S.A.E.)

FACTORY

Industrial Zone - B4 - 10th of Ramadan City

Tel. : (015) 361822 - 361823

Fax : (015) 365080

Selcoplast Cables CO., is committed to supplying its customers with the highest quality of product and of service. Selcoplast cables have undergone rigorous type testing by its Factory Laborator and (E.C.S.C), Engineering Consulting and Studies Center in Faculty of Engineering and fully conform to IEC 227-228 for wires and cables, and Egyptian Standards 182-1995.

MATERIALS AND CONSTRUCTIONS

Most of the standard types of cable that Secoplast manufactures are listed in this catalog. However, a large variety of other sizes and types of cable can be produced. This variety is due to the availability of a number of options with regard to materials or assembly techniques at each stage of manufacture. Thus, cables can be manufactured to suit a particular application by modifying a standard type or by combining selected features of several types of cable.

CONDUCTORS :

The conductors used by Selcoplast fixed power cables are of high conductivity and all meet the requirements of IEC 227-228, and Egyptian standards 182/1995. "Conductor in insulated cables and cords".

Depending upon the actual cable type, conductors may be of stranded or solid copper. Smaller sizes are circular in profile; large conductors are shaped or tightly compacted to reduce their physical size. This compacting sometimes entails a change in the number and size of wires and therefore conductors are generally categorized by their nominal cross sectional area rather than by their stranding configuration.

Materials : Hard copper, Annealed copper.

Coatings : Bare, polyestramide rated 180 C, class H.

INSULATION :

In Accordance with this technical guide, cables, are insulated with PVC (poly vinylchloride).

PVC :

Is a clean, easy to handle material with good electrical characteristics and resistance to water, oils and chemicals, together with inherent toughness and flexibility over a wide temperature range. PVC cables are easy to handle, joint and terminate and have an outstanding record of trouble free service.

| | |
|----------------------|---------------------------------|
| High temp. Rating | : 60°C, 75°C, 90°C, 105°C. |
| Low temp. Rating | : -10°C to -55°C. |
| Flame - retardancy | : Good to excellent |
| Oil resistant rating | : 60°C, 75°C. |
| Flexibility | : Semi-rigid - to very flexible |
| Density | : 1.4 |

ASSEMBLY :

| | |
|-------------|---------------------------------|
| Components: | conductors, pairs, triads. |
| Types | : concentric, bunched, grouped. |
| Lays | : unilay, equilay, reverse lay. |

CABLE IDENTIFICATION :

| | |
|--------------|-----------------------------------|
| Alphanumeric | : Words & numbers identification. |
| Colors | : up to 20 distinct color. |

JACKETS :

| | | |
|-----|---------------------------|----------------------|
| PVC | High temp rating | : 75°C, 90°C, 105°C. |
| | Low temp. Rating | : -10°C to -55°C. |
| | Flame - retardancy | : Good to excellent |
| | Oil resistant rating | : 60°C, 75°C. |
| | Sun light resistant color | : All colors. |

ORDERING ADVICE :

The following technical details will ensure that your enquires and orders are dealt with quickly and efficiently :

1. Length of cables required and individual drum length *.
2. Voltage designation.
3. Relevant Egyptian or international standard.
4. Number of cords.
5. Conductor size and, where applicable.
6. Conductor material i.e. Copper, aluminum.
7. Type of insulation.
8. Any other requirement e.g. Circular conductors, special PVC sheath material, drum weight limitations, operating environment.

* Cable are normally supplied in length of 100 meter up to 500 meter for 95 mm² 120, 150, 185 & 300 mm².
Other lengths can be supplied if required.

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SELCOPLAST CABLES



SELCO PLAST
POWER CABLES
OVER HEAD CONDUCTORS

SELCOPLAST CABLES



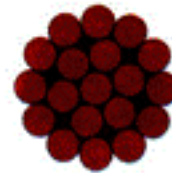
Product Range :

1. Bare hard drawn copper
2. All Aluminium Conductor (AAC)
3. All Aluminium Alloy Conductor (A AAC)
3. Aluminium Conductor Steel Reinforced (ACSR)
5. Service drop cables.

Cable Construction :

1. **Conductor** : Copper, Aluminium or Alluminium Alloy conductors consist of wires concentrically applied in successive layers in opposite direction in case of ACSR conductor a core of solid or stranded galvanized steel is applied first.
2. **Insulation** : In case of sevice drop cables, an extruded layer of PVC or XLPE with 2.5 % of carbon black as sun resistant is applied upon the conductor.

Bare Soft and Hard Drawn Stranded Copper Conductors



Description

Plain bare soft drawn copper conductors as per IEC 228 class 2.

Plain bare hard drawn copper conductors as per DIN 48201.

Application

Soft drawn copper conductors are used for grounding electrical systems, where high conductivity and flexibility are required.

Hard drawn Copper Conductors are used in overhead electrical distribution networks.

| Nominal Cross Sectional Area | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------------------|----------------------------|--------------------------|----------------|
| MM ² | NR x Ø (MM) | Ω/KM | MM | KG/KM |

A - Bare Soft Drawn

| | | | | |
|-----|-----------|--------|------|------|
| 2.5 | 7 x 0.67 | 7.41 | 2.1 | 23 |
| 4 | 7 x 0.84 | 4.61 | 2.5 | 36 |
| 6 | 7 x 1.04 | 3.08 | 3.1 | 54 |
| 10 | 7 x 1.33 | 1.83 | 4.0 | 91 |
| 16 | 7 x 1.68 | 1.15 | 5.1 | 145 |
| 25 | 7 x 2.12 | 0.727 | 6.3 | 227 |
| 35 | 7 x 2.48 | 0.524 | 7.4 | 318 |
| 50 | 19 x 1.80 | 0.387 | 9.0 | 455 |
| 70 | 19 x 2.10 | 0.268 | 10.5 | 635 |
| 95 | 19 x 2.48 | 0.193 | 12.4 | 862 |
| 120 | 37 x 2.00 | 0.153 | 14.0 | 1089 |
| 150 | 37 x 2.22 | 0.124 | 15.5 | 1362 |
| 185 | 37 x 2.48 | 0.0991 | 17.3 | 1679 |
| 240 | 61 x 2.22 | 0.0754 | 19.9 | 2179 |
| 300 | 61 x 2.48 | 0.0601 | 22.3 | 2723 |
| 400 | 61 x 2.81 | 0.0470 | 25.2 | 3631 |
| 500 | 61 x 3.18 | 0.0366 | 28.6 | 4539 |

| Nominal Cross Sectional Area | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------------------|----------------------------|--------------------------|----------------|
| MM ² | NR x Ø (MM) | Ω/KM | MM | KG/KM |

B - Bare Hard Drawn

| | | | | |
|-----|-----------|--------|------|------|
| 10 | 7 x 1.35 | 1.8060 | 4.5 | 93 |
| 16 | 7 x 1.70 | 1.1385 | 5.1 | 146 |
| 25 | 7 x 2.10 | 0.7461 | 6.4 | 231 |
| 35 | 7 x 2.50 | 0.5264 | 7.5 | 324 |
| 50 | 19 x 1.80 | 0.3759 | 9.0 | 463 |
| 70 | 19 x 2.10 | 0.2762 | 10.5 | 648 |
| 95 | 19 x 2.50 | 0.1949 | 12.5 | 880 |
| 120 | 37 x 2.00 | 0.1554 | 14.0 | 1111 |
| 150 | 37 x 2.25 | 0.1238 | 15.7 | 1389 |
| 185 | 37 x 2.50 | 0.1003 | 17.5 | 1713 |
| 240 | 61 x 2.25 | 0.0753 | 20.2 | 2222 |
| 300 | 61 x 2.50 | 0.061 | 22.5 | 2778 |
| 400 | 61 x 2.89 | 0.0456 | 26.0 | 3704 |
| 500 | 61 x 3.23 | 0.0365 | 29.0 | 4630 |

Bare Hard Drawn Stranded All Aluminium Conductors (A.A.C.)



Description

Hard drawn aluminium wires, stranded in successive layers, in opposite direction, to form the aluminium stranded AAC conductor. As per DIN 48201 & BS 215.

Application

All aluminium bare conductors are used for aerial distribution lines having relatively short spans, aerial feeders and bus bars of substations.

A - According To DIN 48201

| Nominal Cross Sectional Area | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Calculated Breaking Load | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------------------|----------------------------|--------------------------|--------------------------|----------------|
| MM ² | NR x Ø (MM) | Ω/KM | KN | MM | KG/KM |
| 16 | 7 x 1.70 | 1.8017 | 2.80 | 5.1 | 44 |
| 25 | 7 x 2.10 | 1.1807 | 4.12 | 6.3 | 69 |
| 35 | 7 x 2.50 | 0.8331 | 5.71 | 7.5 | 96 |
| 50 | 7x 3.00 | 0.5786 | 7.86 | 9.0 | 138 |
| 50 | 19 x 1.80 | 0.5949 | 8.60 | 9.0 | 133 |
| 70 | 19 x 2.10 | 0.4371 | 11.40 | 10.5 | 193 |
| 95 | 19 x 2.50 | 0.3084 | 15.60 | 12.5 | 262 |
| 120 | 19 x 2.80 | 0.2459 | 18.37 | 14.0 | 330 |
| 150 | 37 x 2.25 | 0.1960 | 25.10 | 15.7 | 413 |
| 185 | 37 x 2.50 | 0.1587 | 30.31 | 17.5 | 509 |
| 240 | 61 x 2.25 | 0.1191 | 39.25 | 20.2 | 661 |
| 300 | 61 x 2.50 | 0.09649 | 47.15 | 22.5 | 826 |
| 400 | 61 x 2.89 | 0.07220 | 60.35 | 26.0 | 1102 |
| 500 | 61 x 3.23 | 0.05781 | 74.27 | 29.0 | 1377 |
| 625 | 91 x 2.96 | 0.04625 | 95.05 | 32.5 | 1721 |
| 800 | 91 x 3.35 | 0.03611 | 118.19 | 36.8 | 2203 |
| 1000 | 91 x 3.74 | 0.02897 | 145.35 | 41.1 | 2754 |

B - According To BS 215

| Nominal Cross Sectional Area | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Calculated Breaking Load | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------------------|----------------------------|--------------------------|--------------------------|----------------|
| MM ² | NR x Ø (MM) | Ω/KM | KN | MM | KG/KM |
| 22 | 7 x 2.06 | 1.227 | 3.99 | 6.18 | 64 |
| 50 | 7 x 3.10 | 0.5419 | 8.28 | 9.30 | 145 |
| 60 | 7 x 3.40 | 0.4505 | 9.90 | 10.20 | 174 |
| 100 | 7 x 4.39 | 0.2702 | 16.0 | 13.17 | 290 |
| 150 | 19 x 3.25 | 0.1825 | 25.7 | 16.25 | 434 |
| 200 | 19 x 3.78 | 0.1349 | 32.4 | 18.90 | 587 |
| 250 | 19 x 4.22 | 0.1083 | 40.4 | 21.10 | 731 |
| 300 | 19 x 4.65 | 0.08916 | 48.75 | 23.25 | 888 |
| 400 | 37 x 3.78 | 0.06944 | 63.10 | 26.46 | 1145 |

All Aluminium Alloy Conductors (A.A.A.C.)



Description

All Aluminium Alloy (ALMELEC) Conductors, stranded in successive layers, to form the stranded AAAC conductor. As per IEC 208 & BS 3242

Application

AAAC are mainly used for overhead lines, in transmission and distribution electrical networks, having relatively long spans. They are also used as a messenger to support overhead electrical cables.

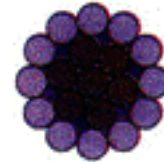
A - According To IEC 208

| Nominal Cross Sectional | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Calculated Breaking Load | Approx. Overall Diameter | Approx. Overall Weight |
|-------------------------|---------------------------------------|----------------------------|--------------------------|--------------------------|------------------------|
| MM ² | NR x Ø (MM) | Ω/KM | KN | MM | KG/KM |
| 16 | 7x1.70 | 2.0910 | 4.5 | 5.1 | 44 |
| 25 | 7x2.10 | 1.3703 | 6.8 | 6.3 | 67 |
| 35 | 7x2.50 | 0.9669 | 9.6 | 7.5 | 94 |
| 50 | 7x3.00 | 0.6714 | 13.8 | 9.0 | 135 |
| 50 | 19x1.80 | 0.6905 | 13.5 | 9.0 | 133 |
| 70 | 19x2.10 | 0.5073 | 18.4 | 10.5 | 181 |
| 95 | 19x2.50 | 0.3580 | 26.1 | 12.5 | 256 |
| 120 | 19x2.80 | 0.2854 | 32.7 | 14.0 | 322 |
| 150 | 37x2.25 | 0.2274 | 41.1 | 15.7 | 406 |
| 185 | 37x2.50 | 0.1842 | 50.7 | 17.5 | 501 |
| 240 | 61x2.25 | 0.1383 | 67.8 | 20.2 | 670 |
| 300 | 61x2.50 | 0.1120 | 83.6 | 22.5 | 827 |
| 400 | 61x2.89 | 0.0838 | 111.8 | 26.0 | 1105 |
| 500 | 61x3.23 | 0.0671 | 139.6 | 29.1 | 1381 |
| 625 | 91x2.96 | 0.0537 | 174.9 | 32.6 | 1733 |
| 800 | 91x3.35 | 0.0419 | 224.0 | 36.8 | 2219 |
| 1000 | 91x3.74 | 0.0336 | 279.2 | 41.1 | 2766 |

B - According To BS 3242

| Nominal Cross Section | Number And Nominal Diameters Of Wires | Max. DC Resistance at 20°C | Calculated Breaking Load | Approx. Overall Diameter | Approx Weight |
|-----------------------|---------------------------------------|----------------------------|--------------------------|--------------------------|---------------|
| MM ² | NR x Ø (MM) | Ω / KM | KN | MM | KG/KM |
| 25 | 7x2.34 | 1.094 | 8.4 | 7.02 | 82 |
| 30 | 7x2.54 | 0.9281 | 9.9 | 7.62 | 97 |
| 40 | 7x2.95 | 0.6880 | 13.4 | 8.85 | 131 |
| 50 | 7x3.30 | 0.5498 | 16.8 | 9.90 | 164 |
| 100 | 7x4.65 | 0.2769 | 33.3 | 13.95 | 325 |
| 150 | 19x3.48 | 0.183 | 50.6 | 17.40 | 497 |
| 175 | 19x3.76 | 0.1568 | 59.1 | 18.80 | 580 |
| 300 | 37x3.53 | 0.09155 | 101.5 | 24.71 | 997 |

Aluminium Conductor Steel Reinforced (A.C.S.R.)



Description

An outer layer of aluminium conductor concentrically stranded over the central core of galvanized solid or stranded steel wires to form aluminium steel reinforced conductor. As per DIN 48204, BS 215 or ASTM B 232.

Application

ACSR conductors are widely used for electrical power transmission over long distances, since they are ideal for long overhead lines spans. They are also used as a messenger for supporting overhead electrical cables.

A - According to DIN 48204

| Nominal Cross Sectional Area | Number and nominal diameter of wires | | Max DC Resistance at 20 °C | Calculated Breaking Load | Approx. Overall Diameter | Approx. Weight |
|------------------------------|--------------------------------------|-------------|----------------------------|--------------------------|--------------------------|----------------|
| | Aluminium | Steel | | | | |
| MM ² | NR x Ø (MM) | NR x Ø (MM) | Ω/ KM | KN | MM | KG |
| 16 / 2.5 | 6 x 1.80 | 1 x 1.80 | 1.875 | 5.62 | 5.4 | 62 |
| 25 / 4 | 6 x 2.25 | 1 x 2.25 | 1.206 | 8.39 | 6.8 | 97 |
| 35 / 6 | 6 x 2.70 | 1 x 2.70 | 0.8365 | 11.92 | 8.1 | 139 |
| 50 / 8 | 6 x 3.20 | 1 x 3.20 | 0.5941 | 16.72 | 9.6 | 196 |
| 70 / 12 | 26 x 1.80 | 7 x 1.45 | 0.413 | 24.97 | 11.6 | 276 |
| 95 / 15 | 26 x 2.10 | 7 x 1.65 | 0.3058 | 32.19 | 13.4 | 369 |
| 120 / 21 | 26 x 2.45 | 7 x 1.95 | 0.253 | 41.43 | 15.7 | 507 |
| 150 / 25 | 26 x 2.70 | 7 x 2.15 | 0.1939 | 52.34 | 17.3 | 630 |
| 185 / 32 | 26 x 3.00 | 7 x 2.40 | 0.164 | 64.78 | 19.2 | 762 |
| 210 / 36 | 26 x 3.20 | 7 x 2.55 | 0.141 | 73.44 | 20.5 | 865 |
| 240 / 40 | 26 x 3.40 | 7 x 2.70 | 0.1188 | 82.58 | 21.7 | 974 |
| 380 / 50 | 54 x 3.00 | 7 x 3.00 | 0.0757 | 120.90 | 27.0 | 1448 |

B - According To BS 215

| Nominal Aluminium Cross-section | Number and nominal diameter of wires | | Total cross - sectional Area | Max DC Resistance at 20°C | Calculated Breaking Load | Approx. Overall Diameter | Approx. Weight |
|---------------------------------|--------------------------------------|-------------|------------------------------|---------------------------|--------------------------|--------------------------|----------------|
| | Aluminium | Steel | | | | | |
| MM ² | NR x Ø (MM) | NR x Ø (MM) | MM ² | Ω/KM | KN | MM | KG/KM |
| 25 | 6/2.36 | 1/2.36 | 30.62 | 1.093 | 9.61 | 7.08 | 106 |
| 30 | 6/2.59 | 1/2.59 | 36.88 | 0.9077 | 11.45 | 7.77 | 128 |
| 40 | 6/3.00 | 1/3.00 | 49.48 | 0.6766 | 15.20 | 9.00 | 172 |
| 50 | 6/3.35 | 1/3.35 | 61.70 | 0.5426 | 18.35 | 10.05 | 214 |
| 70 | 12/2.79 | 7/2.79 | 116.20 | 0.3936 | 61.20 | 13.95 | 538 |
| 100 | 6/4.72 | 7/1.57 | 118.50 | 0.2733 | 32.70 | 14.15 | 394 |
| 150 | 30/2.59 | 7/2.59 | 194.90 | 0.1828 | 69.20 | 18.13 | 726 |
| 150 | 18/3.35 | 1/3.35 | 167.50 | 0.1815 | 35.70 | 16.75 | 506 |
| 175 | 30/2.79 | 7/2.79 | 226.20 | 0.1576 | 79.80 | 19.53 | 842 |
| 175 | 18/3.61 | 1/3.61 | 194.50 | 0.1563 | 41.10 | 18.05 | 587 |
| 200 | 30/3.00 | 7/3.00 | 261.50 | 0.1363 | 92.25 | 21.00 | 974 |
| 200 | 18/3.86 | 1/3.86 | 222.30 | 0.1367 | 46.55 | 19.30 | 671 |
| 400 | 54/3.18 | 7/3.18 | 484.50 | 0.0674 | 131.90 | 28.62 | 1621 |

Aluminium Conductor Steel Reinforced (A.C.S.R.)

C - According To ASTM B 232

| Cross Sectional Area | Number and Nominal diameter of wires | | Calculated DC resistance at 20°C | Calculated Rated Tensile Strength | Approx. Overall Diameter | Approx. weight | |
|----------------------------|--|-------------|---|---|--------------------------------|-------------------|-------|
| | Aluminium | Steel | | | | Aluminium | Steel |
| | MM ² | NR x Ø (MM) | | | | NR x Ø (MM) | Ω/KM |
| 40.5 | 8x2.54 | 1x4.24 | 0.7112 | 23.1 | 9.3 | 112 | 110 |
| 51.6 | 12x2.34 | 7x2.34 | 0.5614 | 46.2 | 11.7 | 143 | 235 |
| 56.1 | 12x2.44 | 7x2.44 | 0.5163 | 50.2 | 12.2 | 156 | 256 |
| 68.2 | 12x2.69 | 7x2.69 | 0.4248 | 60.7 | 13.5 | 189 | 311 |
| 80.4 | 12x2.92 | 7x2.92 | 0.3605 | 71.1 | 14.6 | 223 | 367 |
| 89.4 | 12x3.08 | 7x3.08 | 0.3240 | 76.7 | 15.4 | 248 | 409 |
| 96.5 | 12x3.20 | 7x3.20 | 0.3002 | 82.8 | 16.0 | 268 | 441 |
| 102.8 | 16x2.86 | 19x2.48 | 0.2819 | 126.5 | 18.1 | 285 | 722 |
| 107.1 | 12x3.37 | 7x3.37 | 0.2707 | 91.8 | 16.9 | 297 | 488 |
| 13.3 | 6x1.68 | 1x1.68 | 2.1570 | 5.3 | 5.0 | 36 | 17 |
| 21.2 | 6x2.12 | 1x2.12 | 1.3545 | 8.3 | 6.4 | 58 | 27 |
| 21.1 | 7x1.96 | 1x2.61 | 1.3583 | 10.5 | 6.5 | 58 | 42 |
| 33.6 | 6x2.67 | 1x2.67 | 0.8540 | 12.7 | 8.0 | 92 | 44 |
| 33.5 | 7x2.47 | 1x3.30 | 0.8553 | 16.1 | 8.3 | 92 | 67 |
| 42.4 | 6x3.0 | 1x3.0 | 0.6764 | 15.8 | 9.0 | 117 | 55 |
| 53.5 | 6x3.37 | 1x3.37 | 0.5360 | 19.4 | 10.1 | 147 | 69 |
| 67.4 | 6x3.78 | 1x3.78 | 0.4261 | 23.6 | 11.4 | 185 | 87 |
| 85.1 | 6x4.25 | 1x4.25 | 0.3370 | 29.4 | 12.7 | 233 | 110 |
| 107.2 | 6x4.77 | 1x4.77 | 0.2676 | 37.1 | 14.3 | 294 | 139 |
| 135.0 | 18x3.09 | 1x3.09 | 0.2136 | 30.3 | 15.5 | 375 | 59 |
| 134.9 | 26x2.57 | 7x2.0 | 0.2148 | 50.2 | 16.3 | 373 | 172 |
| 152.2 | 26x2.73 | 7x2.12 | 0.1904 | 56.6 | 17.3 | 421 | 193 |
| 170.2 | 18x3.47 | 1x3.47 | 0.1694 | 38.2 | 17.4 | 470 | 74 |
| 170.6 | 26x2.89 | 7x2.25 | 0.1699 | 62.8 | 18.3 | 472 | 217 |
| 170.5 | 30x2.69 | 7x2.69 | 0.1703 | 77.4 | 18.8 | 474 | 311 |
| 200.9 | 18x3.77 | 1x3.77 | 0.1435 | 44.3 | 18.9 | 555 | 87 |
| 201.6 | 24x3.27 | 7x2.18 | 0.1437 | 64.7 | 19.6 | 558 | 204 |
| 201.3 | 26x3.14 | 7x2.44 | 0.1439 | 72.1 | 19.9 | 558 | 256 |
| 200.9 | 30x2.92 | 7x2.92 | 0.1446 | 90.3 | 20.5 | 559 | 367 |
| 242.3 | 18x4.14 | 1x4.14 | 0.1190 | 52.3 | 20.7 | 667 | 105 |
| 241.6 | 24x3.58 | 7x2.39 | 0.1199 | 76.8 | 21.5 | 670 | 245 |
| 241.7 | 26x3.44 | 7x2.67 | 0.1199 | 86.4 | 21.8 | 670 | 308 |
| 241.3 | 30x3.2 | 7x3.20 | 0.1204 | 105.2 | 22.4 | 672 | 440 |
| 282.5 | 18x4.47 | 1x4.47 | 0.1021 | 61 | 22.3 | 777 | 122 |
| 282.3 | 24x3.87 | 7x2.58 | 0.1026 | 88.3 | 23.2 | 782 | 285 |
| 282.6 | 26x3.72 | 7x2.89 | 0.1025 | 101.1 | 23.5 | 781 | 359 |
| 282.1 | 30x3.46 | 7x3.46 | 0.1030 | 122.9 | 24.2 | 783 | 514 |

Aluminium Conductors Steel Reinforced (A.C.S.R.)

C - According TO ASTM B 232

| Cross Sectional Area | Number and Nominal diameter of wires | | Calculated DC resistance at 20°C | Calculated Rated Tensile Strength | Approx. Overall Diameter | Approx. weight | |
|----------------------------|--|-------------|---|---|--------------------------------|-------------------|-------|
| | Aluminium | Steel | | | | Aluminium | Steel |
| | MM ² | NR x Ø (MM) | | | | NR x Ø (MM) | Ω/KM |
| 306.1 | 24x4.03 | 7x2.69 | 0.0946 | 95.9 | 24.2 | 850 | 311 |
| 305.8 | 26x3.87 | 7x3.01 | 0.0947 | 108.1 | 24.5 | 849 | 390 |
| 307.1 | 30x3.61 | 7x3.61 | 0.0946 | 129 | 25.3 | 851 | 559 |
| 307.1 | 30x3.61 | 19x2.16 | 0.0946 | 133.4 | 25.3 | 851 | 547 |
| 323.0 | 36x3.38 | 1x3.38 | 0.0893 | 60.7 | 23.7 | 888 | 70 |
| 323.0 | 18x4.78 | 1x4.78 | 0.0893 | 69.7 | 23.9 | 889 | 139 |
| 323.1 | 24x4.14 | 7x2.76 | 0.0897 | 101.0 | 24.8 | 893 | 326 |
| 321.8 | 26x3.97 | 7x3.09 | 0.0900 | 111.9 | 25.2 | 893 | 409 |
| 322.6 | 30x3.70 | 7x3.70 | 0.0900 | 135.5 | 25.9 | 895 | 588 |
| 322.6 | 30x3.70 | 19x2.22 | 0.0900 | 140.6 | 25.9 | 895 | 575 |
| 337.3 | 24x4.23 | 7x2.82 | 0.859 | 105.5 | 25.4 | 936 | 342 |
| 338.3 | 26x4.07 | 7x3.16 | 0.0857 | 117.3 | 25.8 | 936 | 429 |
| 363.3 | 24x4.39 | 7x2.92 | 0.0798 | 113.3 | 26.3 | 1005 | 367 |
| 361.9 | 26x4.21 | 7x3.28 | 0.0800 | 126.0 | 26.7 | 1004 | 461 |
| 362.1 | 30x3.92 | 19x2.35 | 0.0802 | 153.7 | 27.5 | 1006 | 646 |
| 402.3 | 24x4.62 | 7x3.08 | 0.0720 | 123.8 | 27.7 | 1116 | 408 |
| 402.6 | 26x4.44 | 7x3.45 | 0.0720 | 139.7 | 28.1 | 1117 | 511 |
| 403.8 | 45x3.38 | 7x2.25 | 0.0718 | 97.5 | 27.0 | 1115 | 217 |
| 401.9 | 36x3.77 | 1x3.77 | 0.0717 | 74.7 | 26.4 | 1111 | 87 |
| 402.3 | 54x3.08 | 7x3.08 | 0.0720 | 124.3 | 27.7 | 1115 | 407 |
| 403.8 | 30x4.14 | 19x2.48 | 0.0719 | 171.2 | 29.0 | 1119 | 718 |
| 455.5 | 45x3.59 | 7x2.40 | 0.0636 | 109.4 | 28.7 | 1263 | 246 |
| 456.3 | 54x3.28 | 7x3.28 | 0.0635 | 141.0 | 29.5 | 1263 | 461 |
| 483.8 | 45x3.7 | 7x2.47 | 0.0599 | 116.1 | 29.6 | 1339 | 261 |
| 484.6 | 36x4.14 | 1x4.14 | 0.0595 | 87.9 | 29.0 | 1335 | 105 |
| 484.5 | 54x3.38 | 7x3.38 | 0.0598 | 149.7 | 30.4 | 1338 | 490 |
| 523.9 | 45x3.85 | 7x2.57 | 0.0553 | 123.3 | 30.8 | 1450 | 283 |
| 522.8 | 36x4.30 | 1x4.30 | 0.0551 | 94.8 | 30.1 | 1444 | 113 |
| 522.5 | 54x3.51 | 7x3.51 | 0.0554 | 161.5 | 31.6 | 1450 | 529 |
| 565.5 | 45x4.0 | 7x2.66 | 0.0512 | 132.7 | 32.0 | 1562 | 304 |
| 565.0 | 54x3.65 | 19x2.19 | 0.0515 | 174.6 | 32.8 | 1571 | 558 |
| 605.8 | 45x4.14 | 7x2.76 | 0.0478 | 142.4 | 33.1 | 1674 | 326 |
| 602.8 | 54x3.77 | 19x2.27 | 0.0483 | 186.9 | 34.0 | 1681 | 599 |
| 644.4 | 45x4.27 | 7x2.85 | 0.0450 | 151.6 | 34.2 | 1786 | 348 |
| 645.1 | 54x3.90 | 19x2.34 | 0.0451 | 194.1 | 35.1 | 1795 | 639 |
| 643.3 | 36x4.77 | 1x4.77 | 0.0448 | 116.7 | 33.4 | 1777 | 140 |

Aluminium Conductors Steel Reinforced (A.C.S.R.)

C - According TO ASTM B 232

| Cross Sectional Area | Number and Nominal diameter of wires | | Calculated DC resistance at 20°C | Calculated Rated Tensile Strength | Approx. Overall Diameter | Approx. weight | |
|----------------------|--------------------------------------|-------------|----------------------------------|-----------------------------------|--------------------------|----------------|-------|
| | Aluminium | Steel | | | | Aluminium | Steel |
| MM ² | NR x Ø (MM) | NR x Ø (MM) | Ω/KM | KN | MM | KG/KM | KG/KM |
| 684.2 | 45x4.40 | 7x2.93 | 0.0423 | 160.7 | 35.2 | 1897 | 370 |
| 685.4 | 54x4.02 | 19x2.41 | 0.0425 | 206.1 | 36.2 | 1906 | 679 |
| 725.2 | 45x4.53 | 7x3.02 | 0.0399 | 170.5 | 36.3 | 2010 | 392 |
| 726.9 | 54x4.14 | 19x2.48 | 0.0401 | 218.4 | 37.2 | 2019 | 719 |
| 746.2 | 45x4.65 | 7x3.10 | 0.0379 | 177.6 | 37.2 | 2120 | 413 |
| 766.1 | 54x4.25 | 19x2.55 | 0.0380 | 230.5 | 38.2 | 2129 | 758 |
| 807.5 | 45x4.78 | 7x3.18 | 0.0359 | 187.4 | 38.2 | 2232 | 435 |
| 806.2 | 54x4.36 | 19x2.62 | 0.0361 | 243.0 | 39.2 | 2242 | 799 |

Service Drop Cables Copper Conductors & XLPE Insulated



Description

They are composed of one or more insulated conductors and one neutral (bare or insulated) conductor. They are required as two (Duplex) or three (Triplex) or four (quadruplex) conductors, XLPE with 2.5 % carbon black insulated. As per NEMA ICEA S - 66 - 524 / IEC 228.

Application

They are used for secondary over head lines (in circuits not exceeding 600 volts phase to phase) on poles or as feeders to residential premises.

Copper Conductors - With bare Neutral Adopted From NEMA (ICEA S-66-524) / IEC 228.

| Phase | | | Neutral | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|----------------------------|----------------------|------------------------------|----------------------------|--------------------------|----------------|
| Nominal Cross Sectional Area | Max. DC Resistance at 20°C | Insulation Thickness | Nominal Cross Sectional Area | Max. DC Resistance at 20°C | | |
| MM ² | Ω / KM | MM | MM ² | Ω / KM | MM | KG/KM |

Two conductors (Duplex)

| | | | | | | |
|-----|-------|-----|-----|-------|------|------|
| 10 | 1.83 | 1.2 | 10 | 1.83 | 10.7 | 198 |
| 16 | 1.15 | 1.2 | 16 | 1.15 | 12.8 | 307 |
| 25 | 0.727 | 1.2 | 25 | 0.727 | 15.3 | 469 |
| 35 | 0.524 | 1.2 | 35 | 0.524 | 17.6 | 650 |
| 50 | 0.387 | 1.5 | 50 | 0.387 | 21.2 | 898 |
| 70 | 0.268 | 1.5 | 70 | 0.268 | 24.5 | 1247 |
| 95 | 0.193 | 1.5 | 95 | 0.193 | 28.3 | 1736 |
| 120 | 0.153 | 1.5 | 120 | 0.153 | 31.4 | 2170 |

Three conductors (Triplex)

| | | | | | | |
|-----|-------|-----|-----|-------|------|------|
| 10 | 1.83 | 1.2 | 10 | 1.83 | 13.7 | 305 |
| 16 | 1.15 | 1.2 | 16 | 1.15 | 15.8 | 471 |
| 25 | 0.727 | 1.2 | 25 | 0.727 | 18.5 | 719 |
| 35 | 0.524 | 1.2 | 35 | 0.524 | 20.7 | 991 |
| 50 | 0.387 | 1.5 | 50 | 0.387 | 25.0 | 1357 |
| 70 | 0.268 | 1.5 | 70 | 0.268 | 28.7 | 1900 |
| 95 | 0.193 | 1.5 | 95 | 0.193 | 32.4 | 2631 |
| 120 | 0.153 | 1.5 | 120 | 0.153 | 35.7 | 3285 |

Four conductors (Quadruplex)

| | | | | | | |
|-----|-------|-----|-----|-------|------|------|
| 10 | 1.83 | 1.2 | 10 | 1.83 | 16.3 | 413 |
| 16 | 1.15 | 1.2 | 16 | 1.15 | 18.8 | 634 |
| 25 | 0.727 | 1.2 | 25 | 0.727 | 22.0 | 970 |
| 35 | 0.524 | 1.2 | 35 | 0.524 | 24.6 | 1332 |
| 50 | 0.387 | 1.5 | 50 | 0.387 | 29.8 | 1821 |
| 70 | 0.268 | 1.5 | 70 | 0.268 | 34.2 | 2553 |
| 95 | 0.193 | 1.5 | 95 | 0.193 | 38.6 | 3526 |
| 120 | 0.153 | 1.5 | 120 | 0.153 | 42.5 | 4579 |

Service Drop Cables Aluminium Conductors & XLPE Insulated



Description

They are composed of one or more insulated conductors and one neutral (bare or insulated) conductor. They are required as two (Duplex) or three (TripleX) or four (quadruplex) conductors, XLPE with 2.5 % carbon black insulated. As per NEMA ICEA S - 66 - 524 / IEC 228.

Application

They are used for secondary over head lines (in circuits not exceeding 600 volts phase to phase) on poles or as feeders to residential premises.

Aluminium Conductors - With bare Neutral Adopted From NEMA (ICEA S-66-524) / IEC 228.

| Phase | | | Neutral | | Approx. Overall Diameter | Approx. Weight |
|---------------------------------------|----------------------------|----------------------|------------------------------|----------------------------|--------------------------|----------------|
| Nominal Cross Sectional Area | Max. DC Resistance at 20°C | Insulation Thickness | Nominal Cross Sectional Area | Max. DC Resistance at 20°C | | |
| MM ² | Ω / KM | MM | MM ² | Ω / KM | MM | KG/KM |
| Two conductors (Duplex) | | | | | | |
| 16 | 1.91 | 1.2 | 16 | 1.91 | 12.9 | 115 |
| 25 | 1.20 | 1.2 | 25 | 1.20 | 15.3 | 168 |
| 35 | 0.868 | 1.2 | 35 | 0.868 | 17.7 | 229 |
| 50 | 0.641 | 1.5 | 50 | 0.641 | 21.4 | 322 |
| 70 | 0.443 | 1.5 | 70 | 0.443 | 24.4 | 428 |
| 95 | 0.320 | 1.5 | 95 | 0.320 | 28.4 | 626 |
| 120 | 0.253 | 1.5 | 120 | 0.253 | 31.4 | 734 |
| Three conductors (Triplex) | | | | | | |
| 16 | 1.91 | 1.2 | 16 | 1.91 | 15.6 | 185 |
| 25 | 1.20 | 1.2 | 25 | 1.20 | 18.0 | 267 |
| 35 | 0.868 | 1.2 | 35 | 0.868 | 20.4 | 364 |
| 50 | 0.641 | 1.5 | 50 | 0.641 | 25.2 | 519 |
| 70 | 0.443 | 1.5 | 70 | 0.443 | 28.2 | 674 |
| 95 | 0.320 | 1.5 | 95 | 0.320 | 32.2 | 928 |
| 120 | 0.253 | 1.5 | 120 | 0.253 | 35.3 | 1245 |
| Four conductors (Quadruplex) | | | | | | |
| 16 | 1.91 | 1.2 | 16 | 1.91 | 19.0 | 256 |
| 25 | 1.20 | 1.2 | 25 | 1.20 | 22.0 | 367 |
| 35 | 0.868 | 1.2 | 35 | 0.868 | 24.9 | 499 |
| 50 | 0.641 | 1.5 | 50 | 0.641 | 30.3 | 710 |
| 70 | 0.443 | 1.5 | 70 | 0.443 | 33.9 | 920 |
| 95 | 0.320 | 1.5 | 95 | 0.320 | 38.8 | 1263 |
| 120 | 0.253 | 1.5 | 120 | 0.253 | 42.5 | 1556 |

SELCOPLAST CABLES



POWER CABLES

SELCOPLAST CABLES



Operating voltage : up to 0.6 / 1 kV

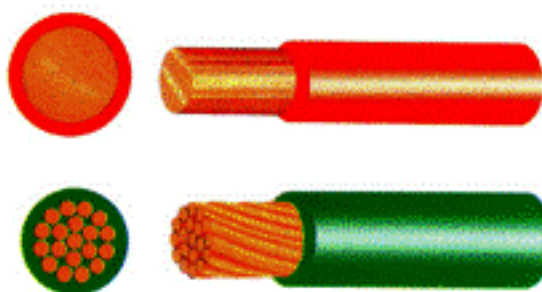
Cable Construction :

1. **Conductor :** Copper or Aluminium conductors, solid, flexible or stranded with round or sectoral shaped conductors.
2. **Insulation :** An extruded layer of PVC or XLPE is applied upon the conductor. PVC insulated cables are suitable for maximum conductor operating temperature of 70 or 85°C, for XLPE it is 90°C.
3. **Assembly :** In case of multicore cables the cores are assembled with suitable lay length, non hygroscopic fillers are applied during assembly to fill space between cores, if needed, then wrapped with polyester tape to form a round cable.
4. **Bedding :** In case of unarmoured three cores cables, if needed, or armoured cables an extruded layer of PVC is applied as bedding.
5. **Armouring :**
 - A. Steel Tape : double layers of steel tapes are applied helically.
 - B. Steel Wire : Galvanized steel wires are applied helically.

In case of single core cable steel armouring is replaced with aluminium to reduce the magnetic losses.

6. **Sheath :** An extruded layer of PVC is applied as outer sheath.

300/500 V & 450/750 V Single Core Cables With Solid or Stranded Copper Conductors and PVC Insulated



Description

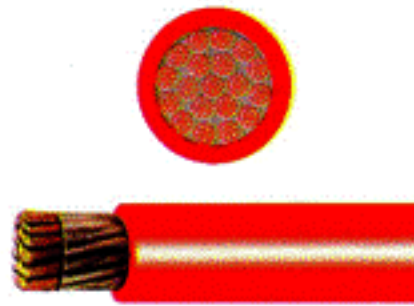
Soft annealed solid or stranded copper conductors insulated with PVC compound rated 70°C or 85°C according to IEC 227 & BS 6004.

Application

For indoor fixed installations in dry locations, laid in conduits, as well as in steel support brackets.

| Nominal Cross Sectional Area MM ² | Max. Conductor Resistance | | Current Rating In Air | | Approx. Overall Diameter MM | Approx. Weight KG/KM |
|---|---------------------------|----------------------|-----------------------|---------------|--------------------------------|-------------------------|
| | DC at 20°C Ω / KM | AC at 70°C Ω / KM | Free A | In Pipes A | | |
| A - 300 / 500 V Cables | | | | | | |
| 0.5 re | 36.0 | 45 | 2 | 2 | 2.0 | 8 |
| 0.75 re | 24.5 | 30.77 | 10 | 7 | 2.2 | 11 |
| 1.0 re | 18.1 | 22.73 | 13 | 10 | 2.3 | 13 |
| B - 450 / 750 V Cables | | | | | | |
| 1.5 re | 12.1 | 14.6 | 17 | 13 | 3.0 | 21 |
| 1.5 rm | 12.1 | 14.6 | 17 | 13 | 3.0 | 22 |
| 2 re | 9.15 | 10.9 | 19 | 15 | 3.2 | 26 |
| 2 rm | 9.15 | 10.9 | 19 | 15 | 3.4 | 27 |
| 2.5 re | 7.41 | 8.89 | 24 | 19 | 3.3 | 31 |
| 2.5 rm | 7.41 | 8.89 | 24 | 19 | 3.6 | 32 |
| 3 re | 6.10 | 7.41 | 27 | 21 | 3.9 | 39 |
| 3 rm | 6.10 | 7.41 | 27 | 21 | 4.2 | 41 |
| 4 re | 4.61 | 5.51 | 32 | 23 | 4.2 | 49 |
| 4 rm | 4.61 | 5.51 | 32 | 23 | 4.5 | 51 |
| 6 re | 3.08 | 3.68 | 40 | 29 | 4.7 | 69 |
| 6 rm | 3.08 | 3.68 | 40 | 29 | 5.1 | 72 |
| 10 rm | 1.83 | 2.17 | 57 | 41 | 6.0 | 112 |
| 16 rm | 1.15 | 1.37 | 76 | 54 | 7.0 | 171 |
| 25 rm | 0.727 | 0.86 | 103 | 70 | 8.8 | 266 |
| 35 rm | 0.524 | 0.63 | 128 | 87 | 9.8 | 363 |
| 50 rm | 0.378 | 0.46 | 156 | 106 | 11.8 | 516 |
| 70 rm | 0.268 | 0.32 | 200 | 131 | 13.3 | 706 |
| 95 rm | 0.193 | 0.23 | 251 | 166 | 15.7 | 958 |
| 120 rm | 0.153 | 0.19 | 293 | 190 | 17.4 | 1197 |
| 150 rm | 0.124 | 0.15 | 335 | 219 | 19.2 | 1495 |
| 185 rm | 0.0991 | 0.12 | 390 | 250 | 22.2 | 1845 |
| 240 rm | 0.0754 | 0.092 | 471 | 300 | 24.5 | 2387 |
| 300 rm | 0.0601 | 0.075 | 540 | 340 | 27.2 | 2977 |

300/500 V & 450/750 V Single Core Cables With Flexible Copper Conductors and PVC Insulated





Description

Soft annealed copper fine wires, bunched together in sub - units or stranded bunched groups into a main units, which forms the flexible conductor. Insulated with soft PVC 70°C or 85°C Compound. Cables are produced according to IEC 227 or BS 6500 & BS 6004.

Application

For indoor fixed installations in dry locations, where particular flexibility is required. For electrical panels connection or for electrical apparatus they can be laid in groups around steel sheets.

| Nominal Cross Sectional Area | Maximum Diameter Of Wires | Max. Conductor Resistance | | Current Rating | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|---------------------------|------------|--|--|--------------------------|----------------|
| | | DC at 20°C | AC at 70°C | Free  | In Pipes  | | |
| MM ² | MM | Ω / KM | Ω / KM | A | A | MM | KG/KM |

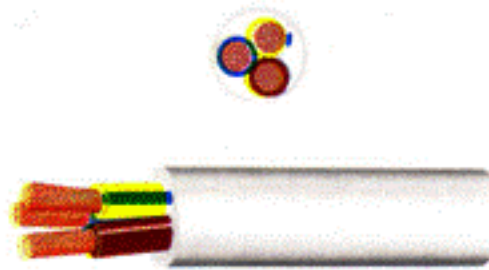
A - 300 / 500 V Cables

| | | | | | | | |
|------|------|------|------|----|----|-----|------|
| 0.50 | 0.21 | 39.0 | 46.7 | 2 | 2 | 2.3 | 9.5 |
| 0.75 | 0.21 | 26.4 | 31.6 | 10 | 7 | 2.6 | 12.5 |
| 1.0 | 0.21 | 19.5 | 23.4 | 13 | 10 | 2.8 | 15.5 |

B - 450/750 V Cables

| | | | | | | | |
|-----|------|--------|-------|-----|-----|------|------|
| 1.5 | 0.26 | 13.3 | 15.95 | 17 | 13 | 3.3 | 22 |
| 2.5 | 0.26 | 7.98 | 9.56 | 24 | 19 | 4.0 | 35 |
| 4 | 0.31 | 4.95 | 5.93 | 32 | 23 | 4.6 | 52 |
| 6 | 0.31 | 3.30 | 3.95 | 40 | 29 | 5.4 | 73 |
| 10 | 0.41 | 1.91 | 2.29 | 57 | 41 | 6.8 | 123 |
| 16 | 0.41 | 1.21 | 1.45 | 76 | 54 | 8.0 | 190 |
| 25 | 0.41 | 0.780 | 0.94 | 103 | 70 | 10.0 | 290 |
| 35 | 0.41 | 0.554 | 0.663 | 128 | 87 | 11.4 | 390 |
| 50 | 0.41 | 0.386 | 0.462 | 156 | 106 | 13.4 | 550 |
| 70 | 0.51 | 0.272 | 0.326 | 200 | 131 | 15.4 | 760 |
| 95 | 0.51 | 0.206 | 0.247 | 251 | 166 | 17.8 | 1010 |
| 120 | 0.51 | 0.161 | 0.193 | 293 | 190 | 19.8 | 1280 |
| 150 | 0.51 | 0.129 | 0.155 | 335 | 219 | 22.0 | 1580 |
| 185 | 0.51 | 0.106 | 0.127 | 390 | 250 | 24.3 | 1970 |
| 240 | 0.51 | 0.0801 | 0.096 | 471 | 300 | 27.5 | 2500 |

300/500 V Multicore Cables, With Flexible Copper Conductors PVC Insulated and PVC Sheathed



Description

Soft annealed copper fine wires, bunched together in sub units or stranded bunched groups into a main units, which forms the flexible conductor. These conductors are insulated with PVC compound rated 70°C then sheathed with PVC compound layer. Cables are produced according to IEC 227 or BS 6500.

Application

For indoor movable installation in dry location connecting to source power portable electrical appliances operating under unfavorable conditions, such as portable lamps, fans, refrigerators, washing machines, vacuum cleaners, TV & house hold heating and ventilating apparatus.

| Number & Cross Section of Conductors | Maximum Diameter Of Wires | Max. Conductor Resistance | | Current Rating | | Approx. Overall Diameter | Approx. Weight |
|--------------------------------------|---------------------------|---------------------------|------------|------------------|------------------|--------------------------|----------------|
| | | DC at 20°C | AC at 70°C | Laid in Free Air | Laid in Conduits | | |
| NR x MM ² | MM | Ω / KM | Ω / KM | A | A | MM | KG/KM |
| 2 x 0.75 | 0.21 | 26.4 | 31.6 | 11 | 8 | 6.8 | 56 |
| 2 x 1.0 | 0.21 | 19.5 | 23.4 | 13 | 10 | 7.9 | 65 |
| 2 x 1.5 | 0.26 | 13.3 | 15.95 | 16 | 13 | 8.0 | 80 |
| 2 x 2.5 | 0.26 | 7.98 | 9.56 | 22 | 18 | 10.0 | 130 |
| 3 x 0.75 | 0.21 | 26.0 | 31.6 | 11 | 8 | 7.3 | 65 |
| 3 x 1.0 | 0.21 | 19.5 | 23.4 | 13 | 10 | 7.7 | 80 |
| 3 x 1.5 | 0.26 | 13.3 | 15.95 | 16 | 13 | 8.6 | 100 |
| 3 x 2.5 | 0.26 | 7.98 | 9.56 | 22 | 18 | 10.8 | 155 |
| 4 x 0.75 | 0.21 | 26.4 | 31.6 | 10 | 7 | 7.8 | 80 |
| 4 x 1.0 | 0.21 | 19.5 | 23.4 | 12 | 9 | 8.5 | 95 |
| 4 x 1.5 | 0.26 | 13.3 | 15.95 | 15 | 12 | 9.6 | 130 |
| 4 x 2.5 | 0.26 | 7.98 | 9.56 | 20 | 16 | 12.2 | 200 |
| 5 x 0.75 | 0.21 | 26.4 | 31.6 | 10 | 7 | 8.8 | 105 |
| 5 x 1.0 | 0.21 | 19.5 | 23.4 | 12 | 9 | 9.5 | 125 |
| 5 x 1.5 | 0.26 | 13.3 | 15.95 | 15 | 12 | 10.6 | 160 |
| 5 x 2.5 | 0.26 | 7.98 | 9.56 | 20 | 16 | 13.2 | 245 |

0.6/1 (1.2) kV, Single Core Cables, With Stranded Circular Copper or Aluminium Conductors, PVC Insulated and PVC Sheathed



Description

Soft annealed stranded copper or aluminium conductor. Insulated with PVC compound covered with a layer of PVC compound to form the overall jacket.

Cables are produced according to IEC 502 or BS 6004.

Application

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

| Nominal Cross Sectional Area MM ² | Max. Conductor Resistance | | Current Rating | | | | | | Approx. Overall Diameter MM | Approx. Weight KG/KM |
|---|---------------------------|--------------------|----------------|----|---|------------------|----|---|--------------------------------|-------------------------|
| | DC at 20°C Ω/KM | AC at 70°C Ω/KM | Laid In Ground | | | Laid In Free Air | | | | |
| | | | ⊙⊙⊙ | ⊙⊙ | ⊙ | ⊙ | ⊙⊙ | ⊙ | | |
| | Ω/KM | Ω/KM | A | A | A | A | A | A | MM | KG/KM |

A - Copper Conductors

| | | | | | | | | | | |
|------|--------|-------|-----|-----|-----|------|------|-----|------|-------|
| 4 | 4.61 | 5.51 | 42 | 40 | 32 | 37 | 33 | 29 | 7.8 | 90 |
| 6 | 3.08 | 3.68 | 52 | 50 | 40 | 48 | 42 | 38 | 8.4 | 115 |
| 10 | 1.83 | 2.17 | 70 | 67 | 52 | 66 | 58 | 51 | 9.3 | 164 |
| 16 | 1.15 | 1.37 | 90 | 85 | 65 | 80 | 75 | 65 | 10.3 | 228 |
| 25 | 0.727 | 0.86 | 115 | 110 | 85 | 105 | 95 | 90 | 11.8 | 336 |
| 35 | 0.524 | 0.63 | 135 | 130 | 105 | 130 | 125 | 110 | 13.0 | 445 |
| 50 | 0.387 | 0.46 | 160 | 155 | 125 | 160 | 150 | 135 | 15.0 | 580 |
| 70 | 0.268 | 0.32 | 200 | 190 | 155 | 200 | 190 | 170 | 16.8 | 790 |
| 95 | 0.193 | 0.23 | 235 | 225 | 185 | 250 | 240 | 210 | 19.2 | 1080 |
| 120 | 0.153 | 0.19 | 270 | 255 | 210 | 285 | 275 | 245 | 21.0 | 1330 |
| 150 | 0.124 | 0.15 | 300 | 285 | 235 | 330 | 320 | 280 | 23.0 | 1640 |
| 185 | 0.0991 | 0.12 | 345 | 325 | 270 | 380 | 370 | 320 | 25.6 | 2010 |
| 240 | 0.0754 | 0.092 | 400 | 375 | 310 | 480 | 460 | 385 | 28.6 | 2650 |
| 300 | 0.0601 | 0.075 | 450 | 420 | 350 | 550 | 530 | 450 | 31.4 | 3300 |
| 400 | 0.0470 | 0.059 | 515 | 475 | 390 | 630 | 615 | 520 | 36.8 | 4160 |
| 500 | 0.0366 | 0.048 | 580 | 525 | 435 | 720 | 700 | 600 | 39.0 | 5300 |
| 630 | 0.0283 | 0.039 | 660 | 590 | 495 | 830 | 810 | 680 | 43.2 | 6620 |
| 800 | 0.0221 | 0.029 | 740 | 650 | 555 | 940 | 920 | 775 | 48.0 | 8450 |
| 1000 | 0.0176 | 0.025 | 820 | 710 | 605 | 1030 | 1010 | 860 | 53.0 | 10540 |

B - Aluminium Conductors

| | | | | | | | | | | |
|------|--------|--------|-----|-----|-----|-----|-----|-----|------|------|
| 16 | 1.91 | 2.29 | 65 | 63 | 50 | 65 | 60 | 45 | 10.3 | 130 |
| 25 | 1.20 | 1.44 | 85 | 83 | 65 | 85 | 80 | 65 | 11.8 | 185 |
| 35 | 0.868 | 1.04 | 105 | 102 | 80 | 105 | 100 | 85 | 13.0 | 230 |
| 50 | 0.641 | 0.770 | 125 | 120 | 95 | 125 | 120 | 105 | 15.0 | 295 |
| 70 | 0.443 | 0.533 | 155 | 145 | 120 | 165 | 155 | 125 | 16.8 | 380 |
| 95 | 0.320 | 0.385 | 185 | 175 | 135 | 205 | 195 | 160 | 19.2 | 505 |
| 120 | 0.253 | 0.305 | 210 | 200 | 165 | 235 | 225 | 185 | 21.2 | 610 |
| 150 | 0.206 | 0.248 | 235 | 225 | 180 | 265 | 255 | 210 | 23.0 | 735 |
| 185 | 0.164 | 0.198 | 265 | 255 | 205 | 310 | 300 | 245 | 25.6 | 900 |
| 240 | 0.125 | 0.151 | 310 | 295 | 240 | 365 | 355 | 290 | 28.6 | 1150 |
| 300 | 0.100 | 0.122 | 355 | 335 | 270 | 420 | 405 | 335 | 31.4 | 1420 |
| 400 | 0.0778 | 0.0954 | 410 | 380 | 310 | 500 | 480 | 390 | 36.8 | 1750 |
| 500 | 0.0605 | 0.0751 | 465 | 430 | 355 | 580 | 560 | 460 | 39.0 | 2220 |
| 630 | 0.0469 | 0.0595 | 535 | 490 | 405 | 680 | 660 | 535 | 43.2 | 2750 |
| 800 | 0.0367 | 0.047 | 600 | 530 | 450 | 765 | 745 | 620 | 48.0 | 3450 |
| 1000 | 0.0291 | 0.037 | 665 | 585 | 495 | 840 | 820 | 690 | 53.0 | 4230 |

0.6/1 (1.2) kV Multicore Cables, With Stranded Copper Conductors, PVC Insulated and PVC Sheathed



Description

Multicore cables of stranded copper conductors are insulated with PVC compound, assembled together, covered with overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 6346.

Application

For outdoor and indoor installations in damp and wet locations.

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two Core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 1.5 mm | 12.10 | 14.60 | 24 | 19 | 20 | 12.2 | 185 |
| 2.5 mm | 7.41 | 8.87 | 30 | 25 | 28 | 13.0 | 225 |
| 4 mm | 4.61 | 5.54 | 40 | 32 | 39 | 14.9 | 305 |
| 6 mm | 3.08 | 3.69 | 50 | 40 | 50 | 16.0 | 380 |
| 10 mm | 1.83 | 2.19 | 65 | 55 | 66 | 18.0 | 525 |
| 16 mm | 1.15 | 1.39 | 85 | 65 | 88 | 20.0 | 710 |
| 25 mm | 0.727 | 0.86 | 110 | 85 | 116 | 23.4 | 1000 |
| 35 mm | 0.524 | 0.628 | 130 | 105 | 143 | 25.6 | 1310 |

Three Core Cables

| | | | | | | | |
|--------|-------|-------|-----|----|-----|------|------|
| 1.5 mm | 12.10 | 14.60 | 21 | 18 | 18 | 12.7 | 210 |
| 2.5 mm | 7.41 | 8.87 | 27 | 23 | 22 | 13.7 | 260 |
| 4 mm | 4.61 | 5.54 | 35 | 30 | 31 | 15.6 | 360 |
| 6 mm | 3.08 | 3.69 | 45 | 36 | 39 | 17.0 | 460 |
| 10 mm | 1.83 | 2.19 | 60 | 48 | 53 | 18.4 | 640 |
| 16 mm | 1.15 | 1.39 | 75 | 60 | 72 | 20.8 | 880 |
| 25 mm | 0.727 | 0.87 | 100 | 80 | 94 | 24.4 | 1260 |
| 35 mm | 0.524 | 0.628 | 120 | 95 | 110 | 27.0 | 1650 |

Four Core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 1.5 mm | 12.10 | 14.60 | 21 | 18 | 18 | 13.4 | 240 |
| 2.5 mm | 7.41 | 8.87 | 27 | 23 | 22 | 14.4 | 315 |
| 4 mm | 4.61 | 5.54 | 35 | 30 | 31 | 16.8 | 440 |
| 6 mm | 3.08 | 3.69 | 45 | 36 | 39 | 18.4 | 560 |
| 10 mm | 1.83 | 2.19 | 60 | 48 | 53 | 20.5 | 780 |
| 16 mm | 1.15 | 1.39 | 75 | 60 | 72 | 22.2 | 1080 |
| 25 mm | 0.727 | 0.87 | 100 | 80 | 94 | 26.6 | 1560 |
| 35 mm | 0.524 | 0.628 | 120 | 95 | 110 | 29.5 | 2030 |
| 50 sm | 0.387 | 0.464 | 145 | 115 | 138 | 30.0 | 2370 |
| 70 sm | 0.268 | 0.322 | 175 | 145 | 171 | 33.4 | 3180 |
| 95 sm | 0.193 | 0.232 | 210 | 165 | 209 | 38.0 | 4340 |
| 120 sm | 0.153 | 0.185 | 240 | 195 | 242 | 41.4 | 5350 |
| 150 sm | 0.124 | 0.151 | 270 | 220 | 275 | 45.8 | 6560 |
| 185 sm | 0.0991 | 0.121 | 300 | 245 | 314 | 50.6 | 8170 |
| 240 sm | 0.0754 | 0.084 | 345 | 290 | 374 | 57.0 | 10580 |
| 300 sm | 0.0601 | 0.077 | 390 | 320 | 440 | 63.0 | 13160 |

0.6/1 (1.2) kV Multicore Cables, With Stranded Copper Conductors, PVC Insulated and PVC Sheathed

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Four Core Cables With Reduced Neutral

| | | | | | | | |
|-------------|--------------|-------------|-----|-----|-----|------|-------|
| 35sm 16rm | 0.524/1.15 | 0.628/1.39 | 120 | 95 | 110 | 28.8 | 1830 |
| 50sm 25rm | 0.387/0.727 | 0.464/0.87 | 145 | 115 | 138 | 28.3 | 2140 |
| 70sm 35rm | 0.268/0.524 | 0.322/0.628 | 175 | 145 | 171 | 31.6 | 2890 |
| 95sm 50sm | 0.193/0.387 | 0.232/0.464 | 210 | 165 | 209 | 36.5 | 3920 |
| 120sm 70sm | 0.153/0.268 | 0.185/0.322 | 240 | 195 | 242 | 39.7 | 4860 |
| 150sm 70sm | 0.124/0.268 | 0.151/0.322 | 270 | 220 | 275 | 43.3 | 5830 |
| 185sm 95sm | 0.0991/0.193 | 0.121/0.232 | 300 | 245 | 314 | 48.0 | 7350 |
| 240sm 120sm | 0.0754/0.153 | 0.084/0.185 | 345 | 290 | 374 | 53.7 | 9510 |
| 300sm 150sm | 0.0601/0.124 | 0.077/0.151 | 390 | 320 | 440 | 59.7 | 11740 |

0.6/1 (1.2) kV Multicore Cables, With Stranded Aluminium Conductors, PVC Insulated and PVC Sheathed



Description

Multicore cables of stranded aluminium conductors are insulated with PVC compound, assembled together, covered with overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 6346

Application

For outdoor and indoor installations in damp and wet locations.

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two Core Cables

| | | | | | | | |
|-------|-------|------|-----|----|-----|------|-----|
| 10 mm | 3.08 | 3.30 | 46 | 39 | 46 | 17.6 | 395 |
| 16 mm | 1.91 | 2.29 | 60 | 46 | 62 | 19.4 | 506 |
| 25 mm | 1.20 | 1.44 | 77 | 60 | 81 | 23.1 | 705 |
| 35 mm | 0.868 | 1.04 | 103 | 83 | 114 | 25.4 | 856 |

Three Core Cables

| | | | | | | | |
|-------|-------|------|----|----|----|------|-----|
| 10 mm | 3.08 | 3.30 | 42 | 34 | 37 | 18.4 | 455 |
| 16 mm | 1.91 | 2.29 | 53 | 42 | 50 | 20.5 | 561 |
| 25 mm | 1.20 | 1.44 | 70 | 56 | 66 | 24.6 | 795 |
| 35 mm | 0.868 | 1.04 | 95 | 75 | 88 | 27.1 | 982 |

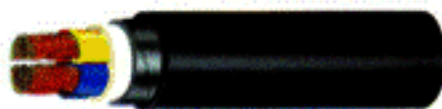
Four Core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 10 mm | 3.08 | 3.30 | 42 | 34 | 37 | 20.5 | 535 |
| 16 mm | 1.91 | 2.29 | 53 | 42 | 50 | 23.5 | 665 |
| 25 mm | 1.20 | 1.44 | 70 | 56 | 66 | 28.5 | 965 |
| 35 mm | 0.868 | 1.04 | 95 | 75 | 88 | 29.5 | 1295 |
| 50 sm | 0.641 | 0.771 | 115 | 85 | 105 | 30.0 | 1140 |
| 70 sm | 0.443 | 0.533 | 135 | 110 | 132 | 33.4 | 1550 |
| 95 sm | 0.320 | 0.385 | 165 | 130 | 160 | 38.0 | 1940 |
| 120 sm | 0.253 | 0.305 | 185 | 150 | 187 | 41.4 | 2360 |
| 150 sm | 0.206 | 0.249 | 210 | 170 | 215 | 45.8 | 2910 |
| 185 sm | 0.164 | 0.199 | 235 | 195 | 248 | 50.6 | 3540 |
| 240 sm | 0.125 | 0.151 | 275 | 225 | 292 | 57.0 | 4520 |
| 300 sm | 0.100 | 0.123 | 310 | 260 | 347 | 63.0 | 5630 |

Four Core Cables With Reduced Neutral

| | | | | | | | |
|--------------|-------------|-------------|-----|-----|-----|------|------|
| 35 mm 16mm | 0.868/1.91 | 1.043/2.29 | 95 | 75 | 88 | 28.8 | 1040 |
| 50 sm 25mm | 0.641/1.20 | 0.771/1.44 | 115 | 85 | 105 | 28.3 | 1060 |
| 70 sm 35mm | 0.443/0.868 | 0.533/1.04 | 135 | 110 | 132 | 31.6 | 1350 |
| 95 sm 50sm | 0.320/0.641 | 0.385/0.771 | 165 | 130 | 160 | 36.5 | 1790 |
| 120 sm 70sm | 0.253/0.443 | 0.305/0.533 | 185 | 150 | 187 | 39.7 | 2150 |
| 150 sm 70sm | 0.206/0.443 | 0.249/0.533 | 210 | 170 | 215 | 43.3 | 2560 |
| 185 sm 95sm | 0.164/0.320 | 0.199/0.385 | 235 | 195 | 248 | 48.0 | 3210 |
| 240 sm 120sm | 0.125/0.253 | 0.151/0.305 | 275 | 225 | 292 | 53.7 | 4030 |
| 300 sm 150sm | 0.100/0.206 | 0.123/0.249 | 310 | 260 | 347 | 59.7 | 5010 |

0.6/1 (1.2) kV Multicore Cables, With Stranded Copper Conductors, PVC Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore cables of stranded copper conductors are insulated with PVC compound, assembled together, armoured with double steel tape, covered with overall jacket of PVC compound. Cables are produced according to IEC 502.

Application

For outdoor and indoor installations in damp and wet locations.

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two Core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 6 mm | 3.08 | 3.69 | 50 | 40 | 50 | 17.6 | 505 |
| 10 mm | 1.83 | 2.19 | 65 | 55 | 66 | 19.4 | 655 |
| 16 mm | 1.15 | 1.39 | 85 | 65 | 88 | 21.6 | 850 |
| 25 mm | 0.727 | 0.87 | 110 | 85 | 116 | 24.7 | 1200 |
| 35 mm | 0.524 | 0.628 | 130 | 105 | 143 | 28.2 | 1520 |

Three Core Cables

| | | | | | | | |
|-------|-------|-------|-----|----|-----|------|------|
| 4 mm | 4.61 | 5.54 | 35 | 30 | 31 | 17.2 | 490 |
| 6 mm | 3.08 | 3.69 | 45 | 36 | 39 | 18.4 | 590 |
| 10 mm | 1.83 | 2.19 | 60 | 48 | 53 | 20.4 | 810 |
| 16 mm | 1.15 | 1.39 | 75 | 60 | 72 | 22.7 | 1050 |
| 25 mm | 0.727 | 0.87 | 100 | 80 | 94 | 26.4 | 1510 |
| 35 mm | 0.524 | 0.628 | 120 | 95 | 110 | 28.8 | 1900 |

Four core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 4 mm | 4.61 | 5.54 | 35 | 30 | 31 | 18.3 | 570 |
| 6 mm | 3.08 | 3.69 | 45 | 36 | 39 | 19.7 | 710 |
| 10 mm | 1.83 | 2.19 | 60 | 48 | 53 | 22.0 | 950 |
| 16 mm | 1.15 | 1.39 | 75 | 60 | 72 | 24.5 | 1260 |
| 25 mm | 0.727 | 0.87 | 100 | 80 | 94 | 28.5 | 1840 |
| 35 mm | 0.524 | 0.628 | 120 | 95 | 110 | 31.5 | 2350 |
| 50 sm | 0.387 | 0.464 | 145 | 115 | 138 | 33.4 | 2730 |
| 70 sm | 0.268 | 0.322 | 175 | 145 | 171 | 36.8 | 3640 |
| 95 sm | 0.193 | 0.232 | 210 | 165 | 209 | 42.6 | 5170 |
| 120 sm | 0.153 | 0.185 | 240 | 195 | 242 | 46.0 | 6320 |
| 150 sm | 0.124 | 0.151 | 270 | 220 | 275 | 51.0 | 7680 |
| 185 sm | 0.0991 | 0.121 | 300 | 245 | 314 | 55.6 | 9390 |
| 240 sm | 0.0754 | 0.084 | 345 | 290 | 374 | 62.2 | 12020 |
| 300 sm | 0.0601 | 0.077 | 390 | 320 | 440 | 68.2 | 14700 |

0.6/1 (1.2) kV Multicore Cables, With Stranded Copper Conductors, PVC Insulated, Steel Tape Armoured and PVC Sheathed

| Nominal Cross Sectional Area | MAX. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Four core Cables with Reduced Neutral

| | | | | | | | |
|---------------|--------------|-------------|-----|-----|-----|------|-------|
| 35 sm 16 rm | 0.524/1.15 | 0.628/1.39 | 120 | 95 | 110 | 30.6 | 2020 |
| 50 sm 25 rm | 0.387/0.727 | 0.464/0.87 | 145 | 115 | 138 | 31.2 | 2470 |
| 70 sm 35 rm | 0.268/0.524 | 0.322/0.628 | 175 | 145 | 171 | 34.4 | 3260 |
| 95 sm 50 sm | 0.193/0.387 | 0.232/0.464 | 210 | 165 | 209 | 40.5 | 4700 |
| 120 sm 70 sm | 0.153/0.268 | 0.185/0.322 | 240 | 195 | 242 | 43.6 | 5740 |
| 150 sm 70 sm | 0.124/0.268 | 0.151/0.322 | 270 | 220 | 275 | 47.6 | 6780 |
| 185 sm 95 sm | 0.0991/0.193 | 0.121/0.232 | 300 | 245 | 314 | 52.5 | 8420 |
| 240 sm 120 sm | 0.0754/0.153 | 0.084/0.185 | 345 | 290 | 374 | 58.0 | 10700 |
| 300 sm 150 sm | 0.0601/0.124 | 0.077/0.151 | 390 | 320 | 440 | 64.2 | 13080 |

0.6 / 1 (1.2) kV Multicore Cables With Stranded Aluminium Conductors PVC Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore Cables of stranded aluminium conductors are insulated with PVC compound, assembled together, armoured with steel tape, covered with overall jacket of PVC compound

Cables are produced according to IEC 502 or BS 6346.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two core Cables

| | | | | | | | |
|-------|-------|------|-----|----|-----|------|------|
| 10 mm | 3.08 | 3.30 | 46 | 39 | 46 | 19.4 | 530 |
| 16 mm | 1.91 | 2.29 | 60 | 46 | 62 | 21.6 | 655 |
| 25 mm | 1.20 | 1.44 | 77 | 60 | 81 | 24.7 | 890 |
| 35 mm | 0.868 | 1.04 | 103 | 83 | 115 | 28.2 | 1090 |

Three core Cables

| | | | | | | | |
|-------|-------|------|----|----|----|------|------|
| 16 mm | 3.08 | 3.30 | 42 | 34 | 37 | 20.4 | 625 |
| 25 mm | 1.91 | 2.29 | 53 | 42 | 50 | 22.7 | 755 |
| 35 mm | 1.20 | 1.44 | 70 | 56 | 66 | 26.4 | 1045 |
| 50 mm | 0.868 | 1.04 | 95 | 75 | 88 | 28.8 | 1250 |

Four core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 10 mm | 3.08 | 2.30 | 42 | 34 | 37 | 22.0 | 705 |
| 16 mm | 1.91 | 2.31 | 53 | 42 | 50 | 24.5 | 865 |
| 25 mm | 1.20 | 1.44 | 70 | 56 | 66 | 28.5 | 1220 |
| 35 mm | 0.868 | 1.043 | 95 | 75 | 88 | 31.5 | 1485 |
| 50 mm | 0.641 | 0.771 | 115 | 85 | 105 | 33.4 | 1490 |
| 70 mm | 0.443 | 0.553 | 135 | 110 | 132 | 36.8 | 1920 |
| 95 mm | 0.320 | 0.385 | 165 | 130 | 160 | 42.6 | 2770 |
| 120 mm | 0.253 | 0.305 | 185 | 150 | 187 | 46.0 | 3240 |
| 150 mm | 0.206 | 0.249 | 210 | 170 | 215 | 51.0 | 3950 |
| 185 mm | 0.164 | 0.199 | 235 | 195 | 248 | 55.6 | 4700 |
| 240 mm | 0.125 | 0.151 | 275 | 225 | 292 | 62.2 | 5860 |
| 300 mm | 0.100 | 0.123 | 310 | 260 | 347 | 68.2 | 6930 |

Four core Cables with Reduced Neutral

| | | | | | | | |
|---------------|-------------|-------------|-----|-----|-----|------|------|
| 35 mm 16 mm | 0.868/1.91 | 1.043/2.29 | 95 | 75 | 88 | 30.6 | 1270 |
| 50 mm 25 mm | 0.641/1.20 | 0.771/1.44 | 115 | 85 | 105 | 31.2 | 1380 |
| 70 mm 35 mm | 0.443/0.868 | 0.533/1.04 | 135 | 110 | 182 | 34.4 | 1820 |
| 95 mm 50 mm | 0.320/0.641 | 0.385/0.771 | 165 | 130 | 160 | 40.5 | 2600 |
| 120 mm 70 mm | 0.253/0.443 | 0.305/0.533 | 185 | 150 | 187 | 43.6 | 3060 |
| 150 mm 70 mm | 0.206/0.443 | 0.249/0.533 | 210 | 170 | 215 | 47.6 | 3570 |
| 185 mm 95 mm | 0.164/0.320 | 0.199/0.385 | 235 | 195 | 248 | 52.5 | 4310 |
| 240 mm 120 mm | 0.125/0.253 | 0.151/0.305 | 275 | 225 | 292 | 58.0 | 5300 |
| 300 mm 150 mm | 0.100/0.206 | 0.123/0.249 | 310 | 260 | 347 | 64.2 | 6390 |

0.6 / 1 (1.2) kV Multicore Cables With Stranded Copper Conductors PVC Insulated, Steel Wire Armoured and PVC Sheathed



Description

Multicore Cables of stranded copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, armoured with steel wires, covered with overall jacket of PVC compound Cables are produced according to IEC 502 or BS 6346.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 4 mm | 4.61 | 5.54 | 40 | 32 | 39 | 17.3 | 550 |
| 6 mm | 3.08 | 3.69 | 50 | 40 | 50 | 18.4 | 640 |
| 10 mm | 1.83 | 2.19 | 65 | 55 | 66 | 20.2 | 800 |
| 16 mm | 1.15 | 1.39 | 85 | 65 | 88 | 22.2 | 1020 |
| 25 mm | 0.727 | 0.87 | 110 | 85 | 116 | 27.4 | 1760 |
| 35 mm | 0.524 | 0.628 | 130 | 105 | 143 | 29.2 | 2120 |

Three core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 4 mm | 4.61 | 5.54 | 35 | 30 | 31 | 19.2 | 700 |
| 6 mm | 3.08 | 3.69 | 45 | 36 | 39 | 20.6 | 820 |
| 10 mm | 1.83 | 2.19 | 60 | 48 | 53 | 22.8 | 1100 |
| 16 mm | 1.15 | 1.39 | 75 | 60 | 72 | 26.8 | 1820 |
| 25 mm | 0.727 | 0.87 | 100 | 80 | 94 | 30.6 | 2340 |
| 35 mm | 0.524 | 0.628 | 120 | 100 | 116 | 33.4 | 2980 |

Four core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 4 mm | 4.61 | 5.54 | 37 | 29 | 29 | 20.0 | 700 |
| 6 mm | 3.08 | 3.69 | 47 | 37 | 37 | 21.4 | 820 |
| 10 mm | 1.83 | 2.19 | 63 | 50 | 50 | 24.4 | 1100 |
| 16 mm | 1.15 | 1.39 | 79 | 68 | 68 | 27.8 | 1820 |
| 25 mm | 0.727 | 0.87 | 105 | 89 | 89 | 32.2 | 2340 |
| 35 mm | 0.524 | 0.628 | 120 | 95 | 116 | 33.4 | 2980 |
| 50 sm | 0.387 | 0.464 | 145 | 115 | 143 | 36.4 | 3780 |
| 70 sm | 0.268 | 0.322 | 175 | 145 | 176 | 39.6 | 4770 |
| 95 sm | 0.193 | 0.232 | 210 | 165 | 215 | 44.2 | 6100 |
| 120 sm | 0.153 | 0.185 | 240 | 195 | 248 | 49.2 | 7750 |
| 150 sm | 0.124 | 0.151 | 270 | 220 | 281 | 53.8 | 9260 |
| 185 sm | 0.0991 | 0.121 | 300 | 245 | 319 | 58.4 | 11130 |
| 240 sm | 0.0754 | 0.084 | 345 | 290 | 380 | 65.0 | 13920 |
| 300 sm | 0.0601 | 0.077 | 390 | 320 | 446 | 71.0 | 16800 |

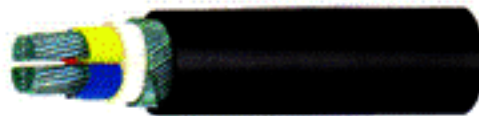
0.6 / 1 (1.2) kV Multicore Cables With Stranded Copper Conductors PVC Insulated, Steel Wire Armoured and PVC Sheathed

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Four core Cables with Reduced Neutral

| | | | | | | | | |
|-------|-------|--------------|-------------|-----|-----|-----|------|-------|
| 35sm | 16sm | 0.524/1.15 | 0.628/1.39 | 120 | 95 | 116 | 33.4 | 2830 |
| 50sm | 25sm | 0.387/0.727 | 0.464/0.87 | 145 | 115 | 143 | 34.4 | 3400 |
| 70sm | 35sm | 0.268/0.524 | 0.322/0.628 | 175 | 145 | 176 | 37.8 | 4330 |
| 95sm | 50sm | 0.193/0.387 | 0.232/0.464 | 210 | 165 | 215 | 42.6 | 5540 |
| 120sm | 70sm | 0.153/0.268 | 0.185/0.322 | 240 | 195 | 248 | 46.8 | 7090 |
| 150sm | 70sm | 0.124/0.268 | 0.151/0.322 | 270 | 220 | 281 | 50.8 | 8250 |
| 185sm | 95sm | 0.0991/0.193 | 0.121/0.232 | 300 | 245 | 319 | 55.6 | 10100 |
| 240sm | 120sm | 0.0754/0.153 | 0.084/0.185 | 345 | 290 | 380 | 61.6 | 12660 |
| 300sm | 150sm | 0.0601/0.124 | 0.077/0.151 | 390 | 320 | 446 | 67.4 | 15220 |

0.6 / 1 (1.2) kV Multicore Cables With Stranded Aluminium Conductors PVC Insulated, Steel Wire Armoured and PVC Sheathed



Description

Multicore Cables of stranded aluminium conductors are insulated with PVC compound assembled together, armoured with steel wires, covered with overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 6346.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|--|---------------------------|-------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |
| Two core Cables | | | | | | | |
| 10 mm | 3.08 | 3.30 | 46 | 39 | 46 | 20.2 | 680 |
| 16 mm | 1.91 | 2.29 | 60 | 46 | 62 | 22.2 | 825 |
| 25 mm | 1.20 | 1.44 | 77 | 60 | 81 | 27.4 | 1450 |
| 35 mm | 0.868 | 1.04 | 103 | 83 | 115 | 29.2 | 2250 |
| Three core Cables | | | | | | | |
| 16 mm | 3.08 | 3.30 | 42 | 34 | 37 | 22.8 | 915 |
| 25 mm | 1.91 | 2.29 | 53 | 42 | 50 | 26.8 | 1525 |
| 35 mm | 1.20 | 1.44 | 70 | 56 | 66 | 30.6 | 1875 |
| 50 mm | 0.868 | 1.04 | 95 | 75 | 88 | 33.4 | 2330 |
| Four core Cables | | | | | | | |
| 10 mm | 3.08 | 3.30 | 42 | 34 | 37 | 24.4 | 1420 |
| 16 mm | 1.91 | 2.31 | 53 | 42 | 50 | 27.8 | 1720 |
| 25 mm | 1.20 | 1.44 | 70 | 56 | 66 | 32.2 | 2110 |
| 35 mm | 0.868 | 1.043 | 95 | 75 | 88 | 33.4 | 2520 |
| 50 mm | 0.641 | 0.771 | 115 | 85 | 105 | 36.4 | 3040 |
| 70 mm | 0.443 | 0.533 | 135 | 110 | 138 | 39.6 | 3750 |
| 95 mm | 0.320 | 0.385 | 165 | 130 | 165 | 44.2 | 4730 |
| 120 mm | 0.253 | 0.305 | 185 | 150 | 193 | 49.2 | 5570 |
| 150 mm | 0.206 | 0.249 | 210 | 170 | 220 | 53.8 | 6430 |
| 185 mm | 0.164 | 0.199 | 235 | 195 | 253 | 58.4 | 7790 |
| 240 mm | 0.125 | 0.151 | 275 | 225 | 297 | 65.0 | 9180 |
| 300 mm | 0.100 | 0.123 | 310 | 260 | 352 | 71.0 | 10590 |
| Four core Cables with Reduced Neutral | | | | | | | |
| 35 mm 16 mm | 0.868/1.91 | 1.043/2.29 | 95 | 75 | 94 | 33.4 | 2080 |
| 50 mm 25 mm | 0.641/1.20 | 0.771/1.44 | 115 | 85 | 110 | 34.4 | 2300 |
| 70 mm 35 mm | 0.443/0.868 | 0.533/1.04 | 135 | 110 | 138 | 37.8 | 2820 |
| 95 mm 50 mm | 0.320/0.641 | 0.385/0.771 | 165 | 130 | 165 | 42.6 | 3410 |
| 120 mm 70 mm | 0.253/0.443 | 0.305/0.533 | 185 | 150 | 193 | 46.8 | 4370 |
| 150 mm 70 mm | 0.206/0.443 | 0.249/0.533 | 210 | 170 | 220 | 50.8 | 5080 |
| 185 mm 95 mm | 0.164/0.320 | 0.199/0.385 | 235 | 195 | 253 | 55.6 | 5950 |
| 240 mm 120 mm | 0.125/0.253 | 0.151/0.305 | 275 | 225 | 297 | 61.6 | 7230 |
| 300 mm 150 mm | 0.100/0.206 | 0.123/0.249 | 310 | 260 | 352 | 67.4 | 8540 |

0.6/1 (1.2) kV Single Core Cables With Stranded Circular Copper or Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

Soft annealed stranded copper or aluminium conductors. Insulated with XLPE compound covered with a layer of PVC compound to form the overall jacket. Cables are according to IEC 502 or BS 5467.

Application

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

| Nominal Cross Sectional Area | Max. Conductor resistance | | Current Rating | | | | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|-----------|----------------|---|---|------------------|-----|---|--------------------------|----------------|
| | DC at 20°C | ACat 90°C | Laid In Ground | | | Laid In Free Air | | | | |
| | | | ⊙⊙⊙ | ⊙ | ⊙ | ⊙ | ⊙⊙⊙ | ⊙ | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | A | A | A | MM | KG/KM |

A - Copper Conductors

| | | | | | | | | | | |
|------|--------|--------|------|-----|-----|------|------|------|------|-------|
| 4 | 4.61 | 5.88 | 55 | 51 | 40 | 53 | 47 | 40 | 7.0 | 80 |
| 6 | 3.08 | 3.93 | 68 | 65 | 53 | 65 | 59 | 53 | 7.6 | 102 |
| 10 | 1.83 | 2.33 | 98 | 86 | 68 | 84 | 79 | 68 | 8.5 | 150 |
| 16 | 1.15 | 1.47 | 116 | 111 | 87 | 116 | 110 | 95 | 9.6 | 213 |
| 25 | 0.727 | 0.927 | 150 | 142 | 110 | 143 | 137 | 121 | 11.3 | 318 |
| 35 | 0.524 | 0.669 | 179 | 172 | 137 | 179 | 173 | 152 | 12.4 | 412 |
| 50 | 0.387 | 0.494 | 210 | 200 | 163 | 221 | 210 | 184 | 14.0 | 536 |
| 70 | 0.268 | 0.343 | 263 | 247 | 200 | 278 | 268 | 236 | 16.0 | 755 |
| 95 | 0.193 | 0.248 | 310 | 294 | 242 | 347 | 336 | 289 | 18.0 | 1020 |
| 120 | 0.153 | 0.197 | 357 | 336 | 273 | 404 | 394 | 341 | 19.7 | 1260 |
| 150 | 0.124 | 0.160 | 394 | 373 | 310 | 457 | 446 | 389 | 21.9 | 1550 |
| 185 | 0.0991 | 0.129 | 452 | 425 | 352 | 530 | 520 | 441 | 24.2 | 1930 |
| 240 | 0.0754 | 0.099 | 520 | 488 | 404 | 651 | 641 | 536 | 27.0 | 2550 |
| 300 | 0.0601 | 0.081 | 588 | 546 | 457 | 824 | 756 | 620 | 29.6 | 3180 |
| 400 | 0.0470 | 0.0638 | 672 | 620 | 515 | 893 | 872 | 714 | 33.2 | 3990 |
| 500 | 0.0366 | 0.0517 | 761 | 693 | 572 | 1008 | 987 | 814 | 36.8 | 5070 |
| 630 | 0.0283 | 0.0425 | 872 | 777 | 651 | 1155 | 1134 | 956 | 42.2 | 6480 |
| 800 | 0.0221 | 0.0292 | 957 | 861 | 735 | 1313 | 1292 | 1092 | 46.8 | 8260 |
| 1000 | 0.0176 | 0.0234 | 1082 | 935 | 798 | 1449 | 1428 | 1208 | 51.8 | 10250 |

B - Aluminium Conductors

| | | | | | | | | | | |
|------|--------|-------|-----|-----|-----|------|------|-----|------|------|
| 16 | 1.91 | 2.45 | 89 | 87 | 66 | 89 | 84 | 63 | 9.6 | 115 |
| 25 | 1.20 | 1.54 | 113 | 110 | 84 | 116 | 110 | 95 | 11.3 | 165 |
| 35 | 0.868 | 1.113 | 137 | 131 | 105 | 142 | 137 | 121 | 12.4 | 205 |
| 50 | 0.641 | 0.822 | 163 | 155 | 121 | 173 | 168 | 147 | 14.0 | 260 |
| 70 | 0.443 | 0.569 | 200 | 189 | 152 | 221 | 215 | 179 | 16.0 | 340 |
| 95 | 0.320 | 0.411 | 236 | 226 | 179 | 284 | 273 | 215 | 18.0 | 450 |
| 120 | 0.253 | 0.325 | 278 | 263 | 215 | 326 | 315 | 242 | 19.7 | 550 |
| 150 | 0.206 | 0.265 | 310 | 294 | 236 | 373 | 362 | 299 | 21.9 | 670 |
| 185 | 0.164 | 0.212 | 352 | 336 | 267 | 436 | 420 | 336 | 24.2 | 830 |
| 240 | 0.125 | 0.163 | 410 | 389 | 315 | 515 | 499 | 399 | 27.0 | 1050 |
| 300 | 0.100 | 0.131 | 467 | 436 | 257 | 578 | 567 | 462 | 29.6 | 1300 |
| 400 | 0.0778 | 0.100 | 541 | 504 | 410 | 693 | 677 | 541 | 33.2 | 1610 |
| 500 | 0.0605 | 0.087 | 609 | 567 | 467 | 809 | 788 | 630 | 36.8 | 2000 |
| 630 | 0.0469 | 0.062 | 698 | 646 | 536 | 945 | 924 | 746 | 42.2 | 2520 |
| 800 | 0.0367 | 0.056 | 788 | 704 | 599 | 1071 | 1050 | 851 | 46.8 | 3150 |
| 1000 | 0.0291 | 0.047 | 872 | 767 | 651 | 1176 | 1155 | 966 | 51.8 | 3870 |

0.6/1 (1.2) kV MultiCore Cables With Stranded Copper Conductors, XLPE Insulated and PVC Sheathed



Description

Multicore cables of stranded copper conductors are insulated with XLPE compound, assembled together and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 5467

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two Core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 1.5 mm | 12.1 | 15.4 | 30 | 25 | 25 | 11.6 | 164 |
| 2.5 mm | 7.41 | 9.45 | 37 | 32 | 34 | 12.6 | 198 |
| 4 mm | 4.61 | 5.88 | 50 | 40 | 46 | 13.6 | 263 |
| 6 mm | 3.08 | 3.93 | 63 | 52 | 60 | 14.8 | 325 |
| 10 mm | 1.83 | 2.33 | 82 | 69 | 79 | 16.9 | 459 |
| 16 mm | 1.15 | 1.47 | 106 | 83 | 105 | 18.9 | 647 |
| 25 mm | 0.727 | 0.927 | 139 | 107 | 139 | 22.2 | 946 |
| 35 mm | 0.524 | 0.669 | 166 | 134 | 166 | 24.5 | 1212 |

Three Core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 1.5 mm | 12.1 | 15.4 | 26 | 23 | 22 | 12.2 | 181 |
| 2.5 mm | 7.41 | 9.45 | 35 | 29 | 32 | 13.0 | 234 |
| 4 mm | 4.61 | 5.88 | 45 | 36 | 41 | 14.2 | 322 |
| 6 mm | 3.08 | 3.93 | 57 | 45 | 50 | 15.6 | 393 |
| 10 mm | 1.83 | 2.33 | 75 | 60 | 68 | 17.6 | 557 |
| 16 mm | 1.15 | 1.47 | 97 | 75 | 89 | 20.2 | 900 |
| 25 mm | 0.727 | 0.927 | 128 | 102 | 120 | 23.8 | 1300 |
| 35 mm | 0.524 | 0.669 | 155 | 120 | 145 | 26.4 | 1700 |

Four Core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 1.5 mm | 12.1 | 15.4 | 26 | 23 | 22 | 13.0 | 218 |
| 2.5 mm | 7.41 | 9.45 | 35 | 29 | 32 | 14.0 | 275 |
| 4 mm | 4.61 | 5.88 | 45 | 36 | 41 | 15.2 | 397 |
| 6 mm | 3.08 | 3.93 | 57 | 45 | 50 | 16.6 | 506 |
| 10 mm | 1.83 | 2.33 | 75 | 60 | 68 | 18.7 | 734 |
| 16 mm | 1.15 | 1.47 | 97 | 75 | 89 | 21.2 | 975 |
| 25 mm | 0.727 | 0.927 | 128 | 102 | 120 | 25.3 | 1480 |
| 35 mm | 0.524 | 0.669 | 155 | 120 | 145 | 28.0 | 2940 |
| 50 sm | 0.387 | 0.494 | 185 | 145 | 179 | 27.9 | 2180 |
| 70 sm | 0.268 | 0.343 | 220 | 180 | 225 | 31.6 | 3020 |
| 95 sm | 0.193 | 0.248 | 265 | 210 | 268 | 35.4 | 4070 |
| 120 sm | 0.153 | 0.197 | 305 | 245 | 310 | 39.2 | 5140 |
| 150 sm | 0.124 | 0.160 | 335 | 275 | 352 | 43.6 | 6315 |
| 185 sm | 0.0991 | 0.129 | 375 | 310 | 404 | 48.7 | 7860 |
| 240 sm | 0.0754 | 0.099 | 435 | 365 | 483 | 54.5 | 10190 |
| 300 sm | 0.0601 | 0.081 | 490 | 405 | 562 | 60.0 | 12640 |

0.6/1 (1.2) kV MultiCore Cables With Stranded Copper Conductors, XLPE Insulated and PVC Sheathed

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Four Core Cables With Reduced Neutral

| | | | | | | | |
|---------------|--------------|-------------|-----|-----|-----|------|-------|
| 35 sm 16 sm | 0.524/1.15 | 0.669/1.47 | 155 | 120 | 142 | 27.4 | 1750 |
| 50 sm 25 sm | 0.387/0.727 | 0.494/0.927 | 185 | 145 | 179 | 26.3 | 1960 |
| 70 sm 35 sm | 0.268/0.524 | 0.343/0.669 | 220 | 180 | 215 | 30.3 | 2720 |
| 95 sm 50 sm | 0.193/0.387 | 0.248/0.494 | 265 | 210 | 268 | 34.0 | 3640 |
| 120 sm 70 sm | 0.153/0.268 | 0.197/0.343 | 305 | 245 | 310 | 37.8 | 4650 |
| 150 sm 70 sm | 0.124/0.268 | 0.160/0.343 | 335 | 275 | 352 | 41.9 | 5530 |
| 185 sm 95 sm | 0.0991/0.193 | 0.129/0.248 | 375 | 310 | 404 | 46.5 | 6980 |
| 240 sm 120 sm | 0.0754/0.153 | 0.099/0.197 | 435 | 365 | 483 | 52.0 | 9040 |
| 300 sm 150 sm | 0.0601/0.124 | 0.081/0.160 | 490 | 405 | 562 | 57.8 | 11120 |

0.6/1 (1.2) kV Multicore Cables With Stranded Aluminium Conductors, XLPE Insulated and PVC Sheathed



Description

Multicore cables of stranded aluminium conductors are insulated with XLPE compound, assembled together and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 5467

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two Core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|-----|
| 10 rm | 3.08 | 3.95 | 57 | 48 | 55 | 16.9 | 335 |
| 16 rm | 1.91 | 2.45 | 74 | 58 | 73 | 18.9 | 450 |
| 25 rm | 1.20 | 1.54 | 97 | 75 | 97 | 22.2 | 640 |
| 35 rm | 0.868 | 1.113 | 128 | 106 | 120 | 24.5 | 780 |

Three Core Cables

| | | | | | | | |
|-------|-------|-------|-----|----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 42 | 48 | 17.6 | 375 |
| 16 rm | 1.91 | 2.45 | 68 | 52 | 62 | 20.2 | 605 |
| 25 rm | 1.20 | 1.54 | 90 | 71 | 84 | 23.8 | 835 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 105 | 26.4 | 1050 |

Four Core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 42 | 48 | 18.7 | 450 |
| 16 rm | 1.91 | 2.45 | 68 | 52 | 62 | 21.2 | 700 |
| 25 rm | 1.20 | 1.54 | 90 | 71 | 84 | 25.3 | 925 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 110 | 28.0 | 1170 |
| 50 sm | 0.641 | 0.822 | 145 | 110 | 136 | 27.9 | 950 |
| 70 sm | 0.443 | 0.569 | 175 | 140 | 168 | 31.6 | 1260 |
| 95 sm | 0.320 | 0.411 | 210 | 165 | 205 | 35.4 | 1650 |
| 120 sm | 0.253 | 0.325 | 235 | 190 | 236 | 39.2 | 2060 |
| 150 sm | 0.206 | 0.265 | 265 | 215 | 278 | 43.6 | 2520 |
| 185 sm | 0.164 | 0.212 | 290 | 240 | 315 | 48.7 | 3140 |
| 240 sm | 0.125 | 0.163 | 340 | 280 | 378 | 54.5 | 4020 |
| 300 sm | 0.100 | 0.131 | 390 | 315 | 446 | 60.0 | 4930 |

Four Core Cables With Reduced Neutral

| | | | | | | | |
|--------------|-------------|-------------|-----|-----|-----|------|------|
| 35 rm 16rm | 0.868/1.91 | 1.113/2.45 | 121 | 96 | 110 | 23.0 | 1000 |
| 50 sm 25sm | 0.641/1.20 | 0.822/1.54 | 145 | 116 | 136 | 26.0 | 925 |
| 70 sm 35sm | 0.443/0.868 | 0.569/1.113 | 178 | 142 | 171 | 30.3 | 1255 |
| 95 sm 50sm | 0.320/0.641 | 0.411/0.822 | 214 | 171 | 211 | 34.0 | 1630 |
| 120 sm 70sm | 0.253/0.443 | 0.325/0.569 | 243 | 195 | 246 | 37.8 | 2030 |
| 150 sm 70sm | 0.206/0.443 | 0.265/0.569 | 272 | 220 | 282 | 41.9 | 2515 |
| 185 sm 95sm | 0.164/0.320 | 0.212/0.411 | 309 | 250 | 326 | 46.5 | 3095 |
| 240 sm 120sm | 0.125/0.253 | 0.163/0.325 | 359 | 292 | 388 | 52.0 | 3900 |
| 300 sm 150sm | 0.100/0.206 | 0.131/0.265 | 406 | 331 | 449 | 57.8 | 4795 |

0.6/1 (1.2) kV Multicore Cables With Stranded Copper Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore cables of stranded copper conductors wires are insulated with XLPE compound, assembled together, armoured with steel tape or steel wire armouring and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 6 mm | 3.08 | 3.93 | 62 | 51 | 59 | 16.7 | 455 |
| 10 mm | 1.83 | 2.33 | 81 | 68 | 78 | 18.6 | 600 |
| 16 mm | 1.15 | 1.47 | 105 | 82 | 103 | 20.7 | 790 |
| 25 mm | 0.727 | 0.927 | 138 | 106 | 137 | 24.0 | 1120 |
| 35 mm | 0.524 | 0.669 | 164 | 132 | 164 | 26.2 | 1380 |

Three core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 6 mm | 3.08 | 3.93 | 56 | 44 | 49 | 17.5 | 545 |
| 10 mm | 1.83 | 2.33 | 74 | 59 | 67 | 19.4 | 740 |
| 16 mm | 1.15 | 1.47 | 96 | 74 | 88 | 21.6 | 980 |
| 25 mm | 0.727 | 0.927 | 127 | 100 | 120 | 25.2 | 1390 |
| 35 mm | 0.524 | 0.669 | 153 | 119 | 143 | 27.8 | 1760 |

Four core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 6 mm | 3.08 | 3.93 | 56 | 44 | 49 | 18.6 | 645 |
| 10 mm | 1.83 | 2.33 | 74 | 59 | 67 | 20.8 | 880 |
| 16 mm | 1.15 | 1.47 | 96 | 74 | 88 | 23.2 | 1190 |
| 25 mm | 0.727 | 0.927 | 127 | 100 | 120 | 27.2 | 1710 |
| 35 mm | 0.524 | 0.669 | 153 | 119 | 143 | 29.7 | 2170 |
| 50 sm | 0.387 | 0.494 | 185 | 145 | 178 | 30.6 | 2530 |
| 70 sm | 0.268 | 0.343 | 220 | 180 | 215 | 35.0 | 3510 |
| 95 sm | 0.193 | 0.248 | 265 | 210 | 268 | 40.4 | 4960 |
| 120 sm | 0.153 | 0.197 | 305 | 245 | 310 | 43.8 | 6080 |
| 150 sm | 0.124 | 0.160 | 335 | 275 | 352 | 49.0 | 7440 |
| 185 sm | 0.0991 | 0.129 | 375 | 310 | 404 | 53.6 | 9100 |
| 240 sm | 0.0754 | 0.099 | 435 | 365 | 483 | 60.0 | 11620 |
| 300 sm | 0.0601 | 0.081 | 490 | 405 | 562 | 65.0 | 14200 |

Four core Cables with Reduced Neutral

| | | | | | | | |
|-------------|--------------|-------------|-----|-----|-----|------|-------|
| 35rm 16rm | 0.524/1.15 | 0.669/1.47 | 153 | 119 | 143 | 28.6 | 1950 |
| 50sm 25rm | 0.387/0.727 | 0.494/0.927 | 185 | 145 | 178 | 29.5 | 2280 |
| 70sm 35rm | 0.268/0.524 | 0.343/0.669 | 220 | 180 | 215 | 33.3 | 3120 |
| 95sm 50sm | 0.193/0.387 | 0.248/0.494 | 265 | 210 | 268 | 38.3 | 4170 |
| 120sm 70sm | 0.153/0.268 | 0.197/0.343 | 305 | 245 | 310 | 42.2 | 5510 |
| 150sm 70sm | 0.124/0.268 | 0.160/0.343 | 335 | 275 | 352 | 46.6 | 6590 |
| 185sm 95sm | 0.0991/0.193 | 0.129/0.248 | 375 | 310 | 404 | 51.2 | 8180 |
| 240sm 120sm | 0.0754/0.153 | 0.099/0.197 | 435 | 365 | 483 | 56.8 | 10360 |
| 300sm 150sm | 0.0601/0.124 | 0.081/0.160 | 490 | 405 | 562 | 62.8 | 12640 |

0.6/1 (1.2) kV Multicore Cables With Stranded Aluminium Conductors, XLPE Insulated, Steel Tape Armoured and PVC Sheathed



Description

Multicore cables of stranded aluminium conductors are insulated with XLPE compound, assembled together, armoured with steel tape and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|-----|
| 10 rm | 3.08 | 3.95 | 56 | 47 | 55 | 18.6 | 480 |
| 16 rm | 1.91 | 2.45 | 73 | 57 | 72 | 20.7 | 595 |
| 25 rm | 1.20 | 1.54 | 96 | 74 | 96 | 24.0 | 810 |
| 35 rm | 0.868 | 1.113 | 129 | 105 | 126 | 26.2 | 950 |

Three core Cables

| | | | | | | | |
|-------|-------|-------|-----|----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 41 | 47 | 19.4 | 555 |
| 16 rm | 1.91 | 2.45 | 67 | 52 | 62 | 21.6 | 685 |
| 25 rm | 1.20 | 1.54 | 89 | 70 | 84 | 25.2 | 925 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 110 | 27.8 | 1110 |

Four core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 41 | 47 | 20.8 | 635 |
| 16 rm | 1.91 | 2.45 | 67 | 52 | 62 | 23.2 | 795 |
| 25 rm | 1.20 | 1.54 | 89 | 70 | 84 | 27.2 | 1090 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 110 | 29.7 | 1305 |
| 50 sm | 0.641 | 0.822 | 145 | 110 | 136 | 30.6 | 1490 |
| 70 sm | 0.443 | 0.569 | 175 | 140 | 168 | 35.0 | 1750 |
| 95 sm | 0.320 | 0.411 | 210 | 165 | 205 | 40.4 | 2540 |
| 120 sm | 0.252 | 0.325 | 235 | 190 | 236 | 43.8 | 3020 |
| 150 sm | 0.206 | 0.265 | 265 | 215 | 278 | 49.0 | 3670 |
| 185 sm | 0.164 | 0.212 | 290 | 240 | 315 | 53.6 | 4380 |
| 240 sm | 0.125 | 0.163 | 340 | 280 | 378 | 60.0 | 4430 |
| 300 sm | 0.100 | 0.131 | 390 | 315 | 446 | 65.0 | 6510 |

Four core Cables with Reduced Neutral

| | | | | | | | |
|-------------|-------------|-------------|-----|-----|-----|------|------|
| 35rm 16rm | 0.868/1.91 | 1.113/2.45 | 120 | 95 | 110 | 28.6 | 1190 |
| 50sm 25rm | 0.641/1.20 | 0.822/1.54 | 145 | 110 | 136 | 29.5 | 1200 |
| 70sm 35rm | 0.443/0.868 | 0.569/1.113 | 175 | 140 | 168 | 33.3 | 1550 |
| 95sm 50sm | 0.320/0.641 | 0.411/0.822 | 210 | 165 | 205 | 38.3 | 1970 |
| 120sm 70sm | 0.253/0.443 | 0.325/0.569 | 235 | 190 | 236 | 42.2 | 2710 |
| 150sm 70sm | 0.206/0.443 | 0.265/0.569 | 265 | 215 | 278 | 46.6 | 3290 |
| 185sm 95sm | 0.164/0.320 | 0.212/0.411 | 290 | 240 | 315 | 51.2 | 3980 |
| 240sm 120sm | 0.125/0.253 | 0.163/0.325 | 340 | 280 | 378 | 56.8 | 4910 |
| 300sm 150sm | 0.100/0.206 | 0.131/0.265 | 390 | 315 | 446 | 62.8 | 5920 |

0.6/1 (1.2) kV Multicore Cables With Stranded Copper Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

Multicore cables of stranded copper conductors are insulated with XLPE compound, assembled together, armoured with steel tape or steel wires and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 5467.

Application

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

| Nominal Cross Sectional Area MM ² | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter MM | Approx. Weight KG/KM |
|---|---------------------------|----------------------|----------------------------|--------------------|-----------------------|--------------------------------|-------------------------|
| | DC at 20°C Ω / KM | AC at 70°C Ω / KM | Laid Direct in Ground A | Laid in Ducts A | Laid in free Air A | | |

Two core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 4 mm | 4.61 | 5.88 | 51 | 41 | 47 | 16.0 | 515 |
| 6 mm | 3.08 | 3.93 | 64 | 53 | 61 | 17.1 | 620 |
| 10 mm | 1.83 | 2.33 | 83 | 70 | 80 | 18.9 | 760 |
| 16 mm | 1.15 | 1.47 | 107 | 84 | 106 | 21.0 | 970 |
| 25 mm | 0.727 | 0.927 | 140 | 108 | 140 | 25.8 | 1680 |
| 35 mm | 0.524 | 0.669 | 168 | 135 | 168 | 28.2 | 1990 |

Three core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 4 mm | 4.61 | 5.88 | 46 | 37 | 42 | 16.5 | 590 |
| 6 mm | 3.08 | 3.93 | 58 | 46 | 51 | 17.8 | 680 |
| 10 mm | 1.83 | 2.33 | 76 | 61 | 69 | 19.7 | 900 |
| 16 mm | 1.15 | 1.47 | 98 | 76 | 90 | 22.2 | 1170 |
| 25 mm | 0.727 | 0.927 | 130 | 103 | 122 | 27.2 | 1980 |
| 35 mm | 0.524 | 0.669 | 158 | 122 | 147 | 29.8 | 2420 |

Four core Cables

| | | | | | | | |
|--------|--------|-------|-----|-----|-----|------|-------|
| 4 mm | 4.61 | 5.88 | 46 | 37 | 42 | 17.5 | 660 |
| 6 mm | 3.08 | 3.93 | 58 | 46 | 51 | 19.0 | 770 |
| 10 mm | 1.83 | 2.33 | 76 | 61 | 69 | 21.2 | 1030 |
| 16 mm | 1.15 | 1.47 | 98 | 76 | 90 | 25.3 | 1730 |
| 25 mm | 0.727 | 0.927 | 130 | 103 | 122 | 29.3 | 2250 |
| 35 mm | 0.524 | 0.669 | 158 | 122 | 147 | 32.0 | 2870 |
| 50 sm | 0.387 | 0.494 | 185 | 145 | 184 | 33.2 | 3280 |
| 70 sm | 0.268 | 0.343 | 220 | 180 | 220 | 38.4 | 4520 |
| 95 sm | 0.193 | 0.248 | 265 | 210 | 273 | 42.4 | 5750 |
| 120 sm | 0.153 | 0.197 | 305 | 245 | 315 | 47.0 | 7380 |
| 150 sm | 0.124 | 0.160 | 335 | 275 | 375 | 52.0 | 8830 |
| 185 sm | 0.0991 | 0.129 | 375 | 310 | 410 | 56.8 | 10640 |
| 240 sm | 0.0754 | 0.099 | 435 | 365 | 488 | 63.0 | 13380 |
| 300 sm | 0.0601 | 0.081 | 490 | 405 | 467 | 68.4 | 16110 |

0.6/1 (1.2) kV Multicore Cables With Stranded Copper Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|--|---------------------------|-------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |
| Four core Cables with Reduced Neutral | | | | | | | |
| 35 sm 16sm | 0.524/1.15 | 0.669/1.47 | 158 | 122 | 147 | 31.2 | 2690 |
| 50 sm 25sm | 0.387/0.727 | 0.494/0.927 | 185 | 145 | 184 | 31.6 | 2950 |
| 70 sm 35sm | 0.268/0.524 | 0.343/0.669 | 220 | 180 | 220 | 36.8 | 4120 |
| 95 sm 50sm | 0.193/0.387 | 0.248/0.494 | 265 | 210 | 273 | 40.6 | 5210 |
| 120 sm 70sm | 0.153/0.268 | 0.197/0.343 | 305 | 245 | 315 | 44.2 | 6360 |
| 150 sm 70sm | 0.124/0.268 | 0.160/0.343 | 335 | 275 | 375 | 49.6 | 7780 |
| 185 sm 95sm | 0.0991/0.193 | 0.129/0.248 | 375 | 310 | 410 | 54.4 | 9690 |
| 240 sm 120sm | 0.0754/0.153 | 0.099/0.197 | 435 | 365 | 488 | 60.0 | 12040 |
| 300 sm 150sm | 0.0601/0.124 | 0.081/0.160 | 490 | 405 | 467 | 66.0 | 14470 |

0.6/1 (1.2) kV Multicore Cables With Stranded Aluminium Conductors, XLPE Insulated, Steel Wire Armoured and PVC Sheathed



Description

Multicore cables of stranded aluminium conductors are insulated with XLPE compound, assembled together, armoured with steel wires and covered with an overall jacket of PVC compound. Cables are produced according to IEC 502 or BS 5467.

Application

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

| Nominal Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|------------------------------|---------------------------|------------|-----------------------|---------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 90°C | Laid Direct in Ground | Laid in Ducts | Laid in free Air | | |
| MM ² | Ω / KM | Ω / KM | A | A | A | MM | KG/KM |

Two core Cables

| | | | | | | | |
|-------|-------|-------|-----|-----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 56 | 47 | 60 | 18.9 | 635 |
| 16 rm | 1.91 | 2.45 | 73 | 57 | 79 | 21.0 | 770 |
| 25 rm | 1.2 | 1.54 | 96 | 74 | 101 | 25.8 | 1370 |
| 35 rm | 0.868 | 1.113 | 129 | 105 | 131 | 28.2 | 1560 |

Three core Cables

| | | | | | | | |
|-------|-------|-------|-----|----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 41 | 52 | 19.7 | 715 |
| 16 rm | 1.91 | 2.45 | 67 | 52 | 67 | 22.2 | 870 |
| 25 rm | 1.2 | 1.54 | 89 | 70 | 89 | 27.2 | 1515 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 115 | 29.8 | 1770 |

Four core Cables

| | | | | | | | |
|--------|-------|-------|-----|-----|-----|------|------|
| 10 rm | 3.08 | 3.95 | 52 | 41 | 52 | 21.2 | 785 |
| 16 rm | 1.91 | 2.45 | 67 | 52 | 67 | 25.3 | 1335 |
| 25 rm | 1.20 | 1.54 | 89 | 70 | 89 | 29.3 | 1630 |
| 35 rm | 0.868 | 1.113 | 120 | 95 | 115 | 32.0 | 2000 |
| 50 sm | 0.641 | 0.822 | 145 | 110 | 141 | 33.2 | 2330 |
| 70 sm | 0.443 | 0.569 | 175 | 140 | 173 | 38.4 | 2760 |
| 95 sm | 0.320 | 0.411 | 210 | 165 | 210 | 42.2 | 3340 |
| 120 sm | 0.252 | 0.325 | 235 | 190 | 241 | 47.0 | 4320 |
| 150 sm | 0.206 | 0.265 | 265 | 215 | 283 | 52.0 | 5080 |
| 185 sm | 0.164 | 0.212 | 290 | 240 | 320 | 56.8 | 5990 |
| 240 sm | 0.125 | 0.163 | 340 | 280 | 383 | 63.0 | 7220 |
| 300 sm | 0.100 | 0.131 | 390 | 315 | 451 | 68.4 | 8440 |

Four core Cables with Reduced Neutral

| | | | | | | | |
|-------------|-------------|-------|-----|-----|-----|------|------|
| 35sm 16rm | 0.868/1.91 | 1.113 | 120 | 95 | 115 | 31.2 | 1940 |
| 50sm 25rm | 0.641/1.20 | 0.882 | 145 | 110 | 141 | 31.6 | 1870 |
| 70sm 35rm | 0.443/0.868 | 0.569 | 175 | 140 | 173 | 36.8 | 2600 |
| 95sm 50sm | 0.320/0.641 | 0.411 | 210 | 165 | 210 | 40.6 | 3090 |
| 120sm 70sm | 0.253/0.443 | 0.325 | 235 | 190 | 241 | 44.2 | 3690 |
| 150sm 70sm | 0.206/0.443 | 0.265 | 265 | 215 | 283 | 49.6 | 4700 |
| 185sm 95sm | 0.164/0.320 | 0.212 | 290 | 240 | 320 | 54.4 | 5550 |
| 240sm 120sm | 0.125/0.253 | 0.163 | 340 | 280 | 383 | 60.0 | 6560 |
| 300sm 150sm | 0.100/0.206 | 0.131 | 390 | 315 | 451 | 66.0 | 7820 |

SELCOPLAST CABLES



Selco plast

Technical Data



TECHNICAL DATA

1. VOLTAGES

voltage : the voltage, which forms the basis for certain operating characteristics and test conditions, is called rated voltage and is denoted by $U_0/U[U_m]$, where :

U_0 : the voltage between the conductor and earth or earthed metallic cover (concentric conductor, screen, armouring, metal sheath).

U : the voltage between the phase conductors.

U_m : the maximum continuous permissible operating voltage of the cable at any time or in any part of the network, excluding temporary fluctuations such as those occurring during switching or faults.

The correlations between U_0/U and U_m in three-phase systems are as follows :

| | | | | | |
|------------|-------|------|--------|-------|-------|
| U_0/U kV | 3.6/6 | 6/10 | 8.7/15 | 12/20 | 18/30 |
| U_m kV | 7.2 | 12 | 17.5 | 24 | 36 |

NOTE :

Same cable design for 6 / 10 and 18 / 30 is applicable for 6.35 / 11 and 19 / 33 kV respectively.

2. CABLE PARAMETERS :

2.1 Resistance :

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

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

Where :

R_θ : Conductor DC resistance at $\theta^\circ\text{C}$ Ω / KM

R_{20} : Conductor DC resistance at 20°C Ω / KM

θ : Operating temperature $^\circ\text{C}$

α : Resistance temperature coefficient $1 / ^\circ\text{C}$

= 0.00393 for Copper

= 0.00403 for Aluminium

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

$$R_{AC} = R_\theta (1 + K_p + K_s)$$

Where K_p and K_s are proximity and skin effect factors respectively which depend on operating frequency and cable laying.

2.2 Inductance :

Self and mutual inductance are formulated as follow :

$$L = K + 0.2 \ln \left(\frac{2S}{d} \right) \quad \text{mH / KM}$$

Where :

L : Inductance mH / KM

K : Constant depends on the conductor's number of wires.

D : Conductor diameter mm

S : Axial spacing between cables in trefoil formation mm

: 1.26 x axial spacing between cables in flat formation mm

2.3 Capacitance :

$$C = \frac{Er}{18 \ln \frac{D}{d}} \quad \mu\text{F / KM}$$

Where :

C : Operating capacitance $\mu\text{F / KM}$

Er : Relative permittivity of insulation material

D : Diameter over insulation mm

d : Conductor diameter mm

2.4 Insulation Resistance :

$$R = K \ln \frac{D}{d} \quad \text{M } \Omega / \text{KM}$$

Where :

R : Insulation Resistance $\text{M } \Omega / \text{KM}$

K : Constant depends on the insulation material

d : Diameter of the conductor (including the semi-conducting layer) mm

D : Diameter of the insulated core mm

2.5 Charging Current :

$$I_{ch} = VWC \quad \text{A / KM}$$

Where :

I_{ch} : Charging Current A / KM

V : Phase voltage V

$$W = 2 \pi f$$

f : Frequency Hz

C : Equivalent capacitance $\mu\text{F / KM}$

3. CABLE AMPACITY :

Cable ampacity or current carrying capacity is defined as the continuous maximum current the cable can carry at its maximum operating temperature.

In the technical information tables the following installation conditions were assumed during the current calculation :

* Ambient air temperature = 40°C

* Ground Temperature = 35°C

* Ground thermal resistivity = 120°C cm / W

In case your installation conditions are different than the stated, the derating factors tabulated in tables 1 - 11 must be used in calculating the new current carrying capacity.

All the cable ampacities are based on IEC 287.

4. Cable short circuit capacity :

Tables 12 - 14 give the short circuit current for conductor and screen based on the following conditions :

1. Short circuit starts from the maximum operating conductor temperature.

2. Maximum temperature during short circuit :

XLPE = 250°C

PVC = 160°C

3. Maximum short circuit current duration is 5 seconds.

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

$$I_{s.c.t} = \frac{I_{s.c.1}}{\sqrt{t}} \quad \text{KA}$$

Where :

$I_{s.c.t}$: Short circuit current for t second KA

$I_{s.c.1}$: Short circuit current for 1 second KA

t : Duration Sec.

5. Voltage Drop :

When calculating the voltage drop the following formula should be used :

A. Single phase circuit.

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

B. Three phase circuit.

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

Where :

V_d : Voltage drop V

I : Load current A

R : Resistance Ω / KM

X : Reactance Ω / KM

$\cos \theta$: Power factor

l : length KM

6. Cable Selection :

The following points may be taken into consideration while selecting a certain cable size and type :

1. Load.
2. Voltage Drop.
3. installation Condition.
4. Short circuit current.
5. Cable length.
6. Running cost (losses) against initial cost.
7. Mechanical hazard.

TABLE 1**GROUND TEMPERATURE DERATING FACTOR**

| GROUND TEMPERATURE °C | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|------------------------|------|------|------|------|------|------|------|
| PVC cables rated 70° C | 1.13 | 1.07 | 1.00 | 0.93 | 0.85 | 0.76 | 0.65 |
| XLPE cables rated 90°C | 1.09 | 1.04 | 1.00 | 0.95 | 0.90 | 0.85 | 0.80 |

TABLE 2**AIR TEMPERATURE DERATING FACTOR**

| AIR TEMPERATURE °C | 25 | 30 | 35 | 40 | 45 | 50 | 55 |
|------------------------|------|------|------|------|------|------|------|
| PVC cables rated 70° C | 1.22 | 1.15 | 1.08 | 1.00 | 0.95 | 0.82 | 0.71 |
| XLPE cables rated 90°C | 1.14 | 1.10 | 1.05 | 1.00 | 0.90 | 0.89 | 0.84 |

TABLE 3**DEPTH OF BURIAL DERATING FACTOR**

| DEPTH OF LAYING MT | CABLES CROSS SECTION | | |
|--------------------|-------------------------|-----------------------------|---------------------------|
| | UPTO 70 mm ² | 95 UPTO 240 mm ² | Above 300 mm ² |
| 0.50 | 1.00 | 1.00 | 1.00 |
| 0.60 | 0.99 | 0.98 | 0.97 |
| 0.80 | 0.97 | 0.96 | 0.94 |
| 1.00 | 0.95 | 0.93 | 0.92 |
| 1.25 | 0.94 | 0.92 | 0.89 |
| 1.50 | 0.93 | 0.90 | 0.87 |
| 1.75 | 0.92 | 0.89 | 0.86 |
| 2.00 | 0.91 | 0.88 | 0.85 |

TABLE 4**SOIL THERMAL RESISTIVITY DERATING FACTOR**

| SOIL THERMAL RESISTIVITY IN ° Cxcm/watt | 80 | 90 | 100 | 120 | 150 | 200 | 250 |
|---|------|------|------|-----|------|------|------|
| Rating Factor | 1.17 | 1.12 | 1.07 | 1.0 | 0.91 | 0.80 | 0.73 |

TABLE 5

PVC RATED TEMPERATURE DERATING FACTOR

| | | | | |
|-----------------------|-------|-------|-------|-------|
| PVC RATED TEMPERATURE | 70 | 85 | 95 | 105 |
| RATING FACTORS | 1.000 | 1.195 | 1.309 | 1.414 |

TABLE 6

TREFOIL OR FLAT FORMATION DERATING FACTORS FOR THREE SINGLE CORE CABLES LAID DIRECT IN GROUND

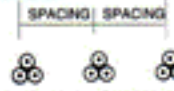

| NUMBER OF CIRCUITS |  TREFOIL FORMATION | |  FLAT FORMATION | | | |
|--------------------|--|------|---|------|------------------|------|
| | TOUGHING | | SPACING = 0.15 M | | SPACING = 0.30 M | |
| NR | TREFOIL | FLAT | TREFOIL | FLAT | TREFOIL | FLAT |
| 2 | 0.77 | 0.80 | 0.82 | 0.85 | 0.88 | 0.91 |
| 3 | 0.66 | 0.69 | 0.73 | 0.76 | 0.80 | 0.83 |
| 4 | 0.60 | 0.63 | 0.68 | 0.71 | 0.74 | 0.77 |
| 5 | 0.56 | 0.59 | 0.64 | 0.67 | 0.72 | 0.75 |
| 6 | 0.53 | 0.57 | 0.61 | 0.64 | 0.70 | 0.73 |

TABLE 7

TREFOIL OR FLAT FORMATION DERATING FACTORS FOR MULTI-CORE CABLES LAID DIRECT IN GROUND

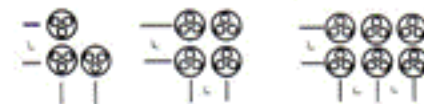
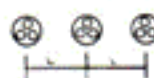
| NUMBER OF CIRCUITS |  TREFOIL FORMATION | | |  FLAT FORMATION | | |
|--------------------|--|------|------------------|---|------------------|------|
| | TOUGHING | | SPACING = 0.15 M | | SPACING = 0.30 M | |
| NR | TREFOIL | FLAT | TREFOIL | FLAT | TREFOIL | FLAT |
| 2 | 0.81 | 0.81 | 0.87 | 0.87 | 0.91 | 0.91 |
| 3 | 0.69 | 0.70 | 0.76 | 0.78 | 0.82 | 0.84 |
| 4 | 0.62 | 0.63 | 0.72 | 0.74 | 0.77 | 0.81 |
| 5 | 0.58 | 0.60 | 0.66 | 0.70 | 0.73 | 0.78 |
| 6 | 0.54 | 0.56 | 0.63 | 0.67 | 0.70 | 0.76 |

TABLE 8

FLAT FORMATION DERATING FACTORS FOR THREE SINGLE CORE CABLES LAID IN FREE AIR

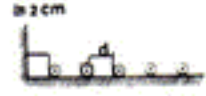
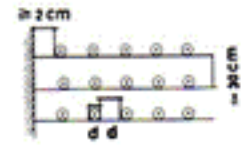

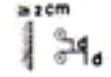

| Clearance = Cable diameter (d) Clearance from the wall $\geq 2\text{cm}$ | | Number of circuits | | |  |
|---|---------------------|--------------------|------|------|---|
| | | 1 | 2 | 3 | |
| Laid on the ground | | 0.92 | 0.89 | 0.88 | |
| Laid cables troughs (circulation of air is restricted) | Number of 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 cables 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 | |
| Arranged near the wall | | 0.94 | 0.91 | 0.89 |  |
| Arranged on the wall | | 0.89 | 0.86 | 0.84 |  |

TABLE 9

TREFOIL TOUCHING FORMATION DERATING FACTORS FOR THREE SINGLE CORE CABLE LAID IN FREE AIR.


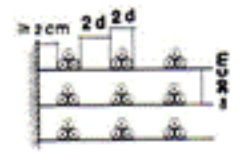


| Clearance = 2d Clearance from the wall $\geq 2\text{cm}$ | | Number of circuits | | |  |
|--|---------------------|--------------------|------|------|---|
| | | 1 | 2 | 3 | |
| Laid on the ground | | 0.95 | 0.90 | 0.88 | |
| Laid cables troughs (circulation of air is restricted) | Number of troughs 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 | |
| Laid on cables racks | Number of 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 | |
| Arrangements for which reduction of the current is not necessary | | | | |  |

TABLE 10

HORIZONTAL OR VERTICAL FORMATION DERATING FACTORS FOR MULTI-CORE CABLES LAID IN FREE AIR





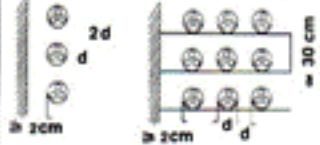
| Clearance = Cable diameter (d) Clearance from the wall $\geq 2\text{cm}$ | | Number of circuits | | | | |  |
|---|---|------------------------------------|------|------|------|---|---|
| | | 1 | 2 | 3 | 6 | 9 | |
| Laid on the ground | | 0.95 | 0.90 | 0.88 | 0.85 | 0.84 | |
| Laid cables troughs (circulation of air is restricted) | Number of troughs | | | | | |  |
| | 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 | |
| Laid on cables racks | Number of 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 | |
| Arranged near the wall | Number of racks | | | | | |  |
| | 1 | 1.00 | 0.93 | 0.90 | 0.87 | 0.86 | |
| | 2 | 1.00 | 0.95 | 0.93 | 0.90 | 0.89 | |
| | 3 | 1.00 | 0.94 | 0.92 | 0.89 | 0.88 | |
| Arrangements for which reduction of the current is not necessary | Clearance from the wall $\geq 2\text{cm}$ | Clearance between cables $\geq 2d$ | | | |  | |

TABLE 11

DERATING FACTORS FOR MULTICORE CABLES TOUCHING AND IN CONTACT WITH THE WALL IN AIR





| Clearance touching throughout and contact with the wall | | Number of cables | | | | |  |
|---|-------------------|------------------|------|------|------|------|---|
| | | 1 | 2 | 3 | 6 | 9 | |
| Laid on the ground | | 0.90 | 0.84 | 0.80 | 0.75 | 0.73 | |
| Laid cables troughs (circulation of air is restricted) | Number of troughs | | | | | |  |
| | 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 | |
| Laid on cables racks | Number of 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 | |
| Arranged on the wall | | 0.95 | 0.78 | 0.73 | 0.68 | 0.66 |  |

TABLE 12**SHORT CIRCUIT CURRENTS FOR COPPER CONDUCTOR - XLPE INSULATED**

| Cross Sectional Area mm ² | TIME sec. | | | | | | | | | |
|--------------------------------------|-----------|-------|-------|-------|-------|------|------|------|------|-------|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1 | 2 | 3 | 4 | 5 |
| 16 | 7.2 | 5.1 | 4.2 | 3.6 | 3.2 | 2.3 | 1.6 | 1.3 | 1.1 | 1.02 |
| 25 | 11.3 | 8.0 | 6.5 | 5.7 | 5.2 | 3.6 | 2.5 | 2.1 | 1.8 | 1.60 |
| 35 | 15.8 | 11.2 | 9.1 | 7.9 | 7.1 | 5.0 | 3.5 | 2.9 | 2.5 | 2.24 |
| 50 | 22.6 | 16.0 | 13.1 | 11.0 | 10.1 | 7.0 | 5.1 | 4.1 | 3.6 | 3.20 |
| 70 | 31.7 | 22.4 | 18.3 | 15.8 | 14.2 | 10.0 | 7.1 | 5.8 | 5.0 | 4.48 |
| 95 | 43.0 | 30.4 | 24.8 | 21.5 | 19.2 | 13.6 | 9.6 | 7.8 | 6.8 | 6.08 |
| 120 | 54.3 | 38.4 | 31.3 | 27.0 | 21.3 | 17.2 | 12.1 | 9.9 | 8.6 | 7.67 |
| 150 | 67.8 | 48.0 | 39.2 | 33.9 | 30.3 | 21.5 | 15.2 | 12.4 | 10.7 | 9.59 |
| 185 | 83.7 | 59.2 | 48.3 | 41.8 | 37.4 | 26.5 | 18.7 | 15.3 | 13.2 | 11.83 |
| 240 | 108.5 | 76.7 | 62.7 | 54.3 | 48.5 | 34.3 | 24.3 | 19.8 | 17.2 | 15.35 |
| 300 | 135.7 | 95.9 | 78.3 | 67.8 | 60.7 | 42.9 | 30.3 | 24.8 | 21.5 | 19.19 |
| 400 | 180.5 | 127.9 | 104.4 | 90.4 | 80.9 | 57.2 | 40.5 | 33.0 | 28.6 | 25.58 |
| 500 | 226.1 | 159.9 | 130.5 | 113.1 | 101.1 | 71.5 | 50.6 | 41.3 | 35.8 | 31.98 |
| 630 | 284.9 | 201.5 | 164.5 | 142.4 | 127.4 | 90.1 | 63.7 | 52.0 | 45.1 | 40.29 |

TABLE 13**SHORT CIRCUIT CURRENTS FOR ALUMINIUM CONDUCTOR - XLPE INSULATED**

| Cross Sectional Area mm ² | TIME sec. | | | | | | | | | |
|--------------------------------------|-----------|-------|-------|------|------|------|------|------|------|-------|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1 | 2 | 3 | 4 | 5 |
| 16 | 4.7 | 3.4 | 2.7 | 2.4 | 2.1 | 1.5 | 1.1 | 0.9 | 0.8 | 0.67 |
| 25 | 7.4 | 5.2 | 4.3 | 3.7 | 3.3 | 2.3 | 1.7 | 1.4 | 1.2 | 1.05 |
| 35 | 10.4 | 7.3 | 6.0 | 5.2 | 4.6 | 3.3 | 2.3 | 1.9 | 1.6 | 1.47 |
| 50 | 14.8 | 10.5 | 8.6 | 7.4 | 6.6 | 4.7 | 3.3 | 2.7 | 2.3 | 2.10 |
| 70 | 20.7 | 14.7 | 12.0 | 10.4 | 9.3 | 6.6 | 4.6 | 3.8 | 3.3 | 2.93 |
| 95 | 28.2 | 20.0 | 16.3 | 14.1 | 12.6 | 8.9 | 6.3 | 5.1 | 4.5 | 3.98 |
| 120 | 35.6 | 25.1 | 20.5 | 17.8 | 15.9 | 11.2 | 8.0 | 6.5 | 5.6 | 5.03 |
| 150 | 44.5 | 31.4 | 25.7 | 22.2 | 19.9 | 14.1 | 9.9 | 8.1 | 7.0 | 6.29 |
| 185 | 54.8 | 38.8 | 31.7 | 27.4 | 24.5 | 17.3 | 12.3 | 10.0 | 8.7 | 7.75 |
| 240 | 71.1 | 50.3 | 41.1 | 35.6 | 31.8 | 22.5 | 15.9 | 13.0 | 11.2 | 10.06 |
| 300 | 88.9 | 62.9 | 51.3 | 44.5 | 39.8 | 28.1 | 19.9 | 16.2 | 14.1 | 12.57 |
| 400 | 118.5 | 83.8 | 68.4 | 59.3 | 53.0 | 37.5 | 26.5 | 21.6 | 18.7 | 16.76 |
| 500 | 148.2 | 104.8 | 85.5 | 74.1 | 66.3 | 46.9 | 33.1 | 27.1 | 23.4 | 20.95 |
| 630 | 186.7 | 132.0 | 107.8 | 93.3 | 83.5 | 59.0 | 41.7 | 34.1 | 29.5 | 26.40 |

TABLE 14**SHORT CIRCUIT CURRENTS FOR COPPER SCREEN**

| Cross Sectional Area mm ² | TIME sec. | | | | | | | | | |
|--------------------------------------|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 1 | 2 | 3 | 4 | 5 |
| 16 | 7.5 | 5.3 | 4.3 | 3.7 | 3.3 | 2.3 | 1.7 | 1.4 | 1.2 | 1.1 |
| 25 | 11.7 | 8.3 | 6.8 | 5.9 | 5.2 | 3.7 | 2.6 | 2.1 | 1.9 | 1.7 |
| 35 | 16.4 | 11.6 | 9.5 | 8.3 | 7.3 | 5.2 | 3.7 | 3.0 | 2.6 | 2.3 |

Conductor temperature before short circuit = 90°C

Maximum conductor temperature during short circuit = 250°C

Maximum screen temperature before short circuit = 80°C

SELCOPLAST CABLES



SELCO PLAST
CONTROL AND
SPECIAL CABLES

SELCOPLAST CABLES



CONTROL CABLES

SELCOPLAST CABLES



INDEX **CONTROL CABLES**

- 1- 0.6/1(1.2)KV control cables with solid copper conductors, P.V.C. insulated and P.V.C. sheathed**
- 2- 0.6/1(1.2)KV control cables with stranded copper conductors, P.V.C. insulated and P.V.C. sheathed**
- 3- 0.6/1(1.2)KV control cables with solid copper conductors, P.V.C. insulated, copper tape screened and P.V.C. sheathed**
- 4- 0.6/1(1.2)KV control cables with stranded copper conductors, P.V.C. insulated, copper tape screened and P.V.C. sheathed**
- 5- 0.6/1(1.2)KV control cables with solid copper conductors, P.V.C. insulated, steel tape armoured and P.V.C. sheathed**

6- 0.6/1(1.2)KV control cables with stranded copper conductors, P.V.C. insulated, steel tape armoured and P.V.C. sheathed

7- 0.6/1(1.2)KV control cables with solid copper conductors, P.V.C. insulated, steel wire armoured and P.V.C. sheathed

8- 0.6/1(1.2)KV control cables with stranded copper conductors, P.V.C. insulated, steel wire armoured and P.V.C. sheathed

SELCOPLAST CABLES



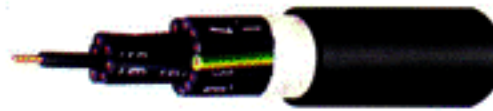
Operating voltage : 0.6 / 1 kV

Cable Construction :

- 1 . Conductor :** Stranded, flexible or solid copper conductors.
- 2. Insulation :** An extruded layer of PVC 70 or 85°C with black color. Cores are identified by printing numbers.
- 3. Assembly :** Insulated conductors are assembled in successive layers, in opposite direction to form cable cores.
- 4. Bedding :** An extruded layer of PVC is applied as bedding.
- 5. Armouring :**
 - A. Steel Tape : double layers of steel tapes are applied helically.
 - B. Steel Wire : Galvanized steel wires are applied helically.
- 6. Screen (if requested) :** over the bedded cores a layer of copper tape or wires is applied helically to form the screen.
- 7. Sheath :** An extruded layer of PVC is applied as the outer sheath.

Control Cables

0.6/1 (1.2) kV Control Cables With Solid Copper Conductors, PVC Insulated and PVC Sheathed



Description

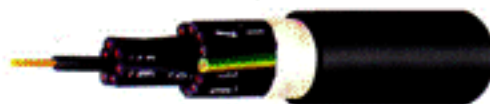
Five or more cores of solid copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor and indoor installations in damp and wet locations, connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations. They are laid in air, in ducts, in trenches, in steel support brackets or direct in ground, when well protected.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 13.0 | 220 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 13.5 | 252 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 16.2 | 335 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 17.2 | 390 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 18.0 | 425 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 19.0 | 490 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 19.8 | 570 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 22.2 | 700 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 24.0 | 850 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 25.8 | 1020 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 14.0 | 300 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 14.7 | 330 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 17.5 | 450 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 18.8 | 540 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 19.6 | 600 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 20.7 | 670 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 21.8 | 780 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 24.2 | 1030 |
| 30 x 2.5 | 7.41 | 8.89 | 11.5 | 10.0 | 8.5 | 25.3 | 1160 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 28.4 | 1410 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 16.8 | 430 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 17.4 | 480 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 20.8 | 670 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 22.0 | 780 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 23.0 | 890 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 24.3 | 1000 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 26.0 | 1170 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 29.4 | 1460 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 32.0 | 1830 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 35.2 | 2320 |

0.6/1 (1.2) kV Control Cables With Stranded Copper Conductors, PVC Insulated and PVC Sheathed



Description

Five or more cores of stranded copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor and indoor installations in damp and wet locations, connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations. They are laid in air, in ducts, in trenches, in steel support brackets or direct in ground, when well protected.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 13.6 | 240 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 14.3 | 270 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 16.9 | 360 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 18.0 | 420 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 18.8 | 450 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 19.8 | 530 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 20.8 | 610 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 23.4 | 760 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 25.3 | 910 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 27.4 | 1100 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 14.8 | 330 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 15.5 | 355 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 18.3 | 480 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 19.8 | 565 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 20.7 | 640 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 21.7 | 715 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 22.9 | 830 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 25.7 | 1120 |
| 30 x 2.5 | 7.41 | 8.89 | 11.5 | 10.0 | 8.5 | 28.1 | 1250 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 30.4 | 1520 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 17.6 | 480 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 18.2 | 520 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 21.9 | 720 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 23.6 | 840 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 24.6 | 950 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 26.0 | 1070 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 27.6 | 1260 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 31.3 | 1580 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 34.2 | 1965 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 37.1 | 2510 |

0.6/1 (1.2) kV Control Cables With Solid Copper Conductors, PVC Insulated, Copper Tape Screened and PVC Sheathed



Description

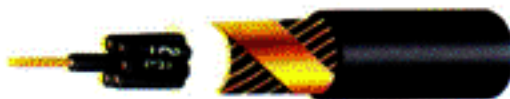
Five or more cores of solid copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, screened with copper wire or tape and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor and indoor installations in damp and wet locations, connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations. They are laid in air, in ducts, in trenches, in steel support brackets or direct in ground, when well protected.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 14.0 | 300 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 14.6 | 350 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 17.8 | 440 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 19.2 | 500 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 20.0 | 560 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 21.0 | 610 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 21.8 | 680 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 25.0 | 900 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 27.6 | 1050 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 29.8 | 1240 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 15.5 | 380 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 17.5 | 450 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 20.3 | 560 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 21.5 | 650 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 22.6 | 750 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 23.8 | 830 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 24.8 | 970 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 27.4 | 1260 |
| 30 x 2.5 | 7.41 | 8.89 | 11.5 | 10.0 | 8.5 | 29.5 | 1380 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 32.6 | 1670 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 17.8 | 530 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 19.6 | 590 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 21.0 | 800 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 24.4 | 920 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 26.0 | 1080 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 27.5 | 1230 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 29.8 | 1430 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 33.2 | 1780 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 36.0 | 2210 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 39.8 | 2790 |

0.6/1 (1.2) kV Control Cables With Stranded Copper Conductors, PVC Insulated, Copper Tape Screened and PVC Sheathed



Description

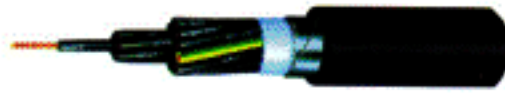
Five or more cores of stranded copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, screened with copper wire or tape and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor and indoor installations in damp and wet locations, connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations. They are laid in air, in ducts, in trenches, in steel support brackets or direct in ground, when well protected.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 14.5 | 330 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 15.3 | 370 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 18.5 | 480 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 20.0 | 540 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 20.8 | 600 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 21.8 | 660 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 22.6 | 730 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 25.7 | 970 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 28.5 | 1130 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 30.6 | 1340 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 16.5 | 420 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 18.3 | 480 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 21.0 | 590 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 22.2 | 690 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 23.4 | 800 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 24.5 | 890 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 25.5 | 1030 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 28.2 | 1340 |
| 30 x 2.5 | 7.41 | 8.89 | 11.0 | 10.0 | 8.5 | 30.4 | 1470 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 33.5 | 1780 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 19.0 | 570 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 20.3 | 630 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 21.8 | 850 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 25.2 | 980 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 26.8 | 1160 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 28.4 | 1310 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 30.7 | 1520 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 34.2 | 1900 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 37.0 | 2350 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 41.0 | 2970 |

0.6/1 (1.2) kV Control Cables With Solid Copper Conductors, PVC Insulated, Steel Tape Armoured and PVC Sheathed



Description

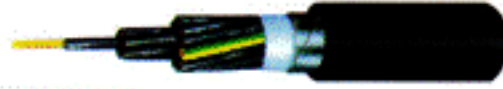
Five or more cores of solid copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, covered with a layer of PVC compound as a bedding, armoured with a steel tape and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502.

Application

For outdoor installations in damp and wet locations, laid direct in the ground, where mechanical damages are expected to occur. They are normally used in connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 14.5 | 335 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 15.4 | 390 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 18.4 | 510 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.0 | 19.9 | 600 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 20.6 | 640 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 21.7 | 720 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 22.7 | 820 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 25.2 | 990 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 27.3 | 1170 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 29.2 | 1360 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 15.0 | 340 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 17.2 | 495 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 20.3 | 650 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 21.6 | 760 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 22.5 | 820 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 23.5 | 920 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 24.6 | 1030 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 27.7 | 1260 |
| 30 x 2.5 | 7.41 | 8.89 | 11.0 | 10.0 | 9.5 | 30.2 | 1520 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 33.0 | 1830 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 18.5 | 610 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 20.1 | 710 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 23.7 | 890 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 25.3 | 1140 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 26.6 | 1180 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 28.2 | 1300 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 29.5 | 1500 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 33.8 | 1890 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 36.7 | 2480 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 39.8 | 3030 |

0.6/1 (1.2) kV, Control Cables With Stranded Copper Conductors, PVC Insulated, Steel Tape Armoured and PVC Sheathed



Description

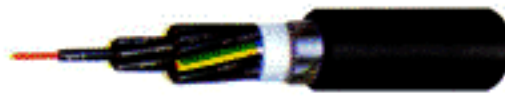
Five or more cores of stranded copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, covered with a layer of PVC compound as a bedding, armoured with a steel tape and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502.

Application

For outdoor installations in damp and wet locations, laid direct in the ground, where mechanical damages are expected to occur. They are normally used in connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 15.0 | 365 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 17.0 | 430 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.0 | 11.5 | 19.6 | 550 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 20.7 | 640 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 21.5 | 680 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 22.4 | 770 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 23.4 | 880 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 26.0 | 1060 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 28.1 | 1250 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 30.1 | 1460 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 17.0 | 480 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 18.0 | 530 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 21.1 | 700 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 22.4 | 810 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.5 | 12.0 | 23.3 | 880 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 24.3 | 990 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 25.4 | 1110 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 28.5 | 1350 |
| 30 x 2.5 | 7.41 | 8.89 | 11.5 | 10.0 | 8.5 | 30.9 | 1630 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 33.8 | 1960 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 19.5 | 660 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 20.9 | 740 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 24.5 | 960 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 26.1 | 1120 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 27.4 | 1270 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 28.8 | 1390 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 30.3 | 1610 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 34.7 | 2030 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.5 | 11.0 | 37.6 | 2660 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 40.5 | 3250 |

0.6/1 (1.2) kV, Control Cables With Solid Copper Conductors, PVC Insulated, Steel Wire Armoured and PVC Sheathed



Description

Five or more cores of solid copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, covered with a layer of PVC compound as a bedding, armoured with steel wire and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor installations in damp and wet locations, laid direct in the ground, where excessive mechanical stress are requested, in slopping and movable Terrains and in vertical or inclined laying, as well as in locations susceptible to sliding (sand deserts). They are normally used in connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 x 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 16.0 | 470 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 17.2 | 530 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 20.2 | 740 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 22.5 | 1050 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 23.3 | 1110 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 24.2 | 1220 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 25.2 | 1320 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 28.0 | 1530 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 30.1 | 1800 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 33.0 | 2180 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 17.2 | 570 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 18.4 | 640 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 22.9 | 1125 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 24.2 | 1240 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 25.1 | 1350 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 26.1 | 1470 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 27.4 | 1620 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 30.5 | 1970 |
| 30 x 2.5 | 7.41 | 8.89 | 115 | 10.0 | 8.5 | 33.7 | 2380 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 36.6 | 2790 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 20.2 | 750 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 22.7 | 1150 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 26.3 | 1460 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 28.2 | 1650 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 29.2 | 1790 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 30.8 | 1980 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 32.1 | 2150 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 37.5 | 3010 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 40.4 | 3430 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 43.3 | 4020 |

0.6/1 (1.2) kV, Control Cables With Stranded Copper Conductors, PVC Insulated, Steel Wire Armoured and PVC Sheathed



Description

Five or more cores of stranded copper conductors are insulated with PVC compound rated 70°C or 85°C, assembled together, covered with a layer of PVC compound as a bedding, armoured with a steel wire and covered with an overall jacket of PVC compound. Cables generally comply with IEC 502 or BS 6346.

Application

For outdoor installations in damp and wet locations, laid direct in the ground, where excessive mechanical stress are requested, in sloping and movable Terrains and in vertical or inclined laying, as well as in locations susceptible to sliding (sand deserts). They are normally used in connecting signalling and control units in industry, in railways, in traffic signals, in Thermopower and Hydropower stations.

| Number & Cross Sectional Area | Max. Conductor Resistance | | Current Rating | | | Approx. Overall Diameter | Approx. Weight |
|-------------------------------|---------------------------|------------|-----------------------|-----------------|------------------|--------------------------|----------------|
| | DC at 20°C | AC at 70°C | Laid Direct in ground | Laid Into Ducts | Laid in Free Air | | |
| NR X MM ² | Ω/KM | Ω/KM | A | A | A | MM | KG/KM |
| 5 X 1.5 | 12.1 | 14.6 | 18.0 | 15.5 | 13.5 | 16.6 | 500 |
| 7 x 1.5 | 12.1 | 14.6 | 16.0 | 14.0 | 12.5 | 18.0 | 550 |
| 10 x 1.5 | 12.1 | 14.6 | 14.0 | 12.5 | 11.5 | 21.0 | 770 |
| 12 x 1.5 | 12.1 | 14.6 | 13.0 | 11.5 | 10.5 | 23.3 | 1080 |
| 14 x 1.5 | 12.1 | 14.6 | 12.0 | 10.5 | 9.5 | 24.2 | 1140 |
| 16 x 1.5 | 12.1 | 14.6 | 11.0 | 10.0 | 9.0 | 25.0 | 1260 |
| 19 x 1.5 | 12.1 | 14.6 | 10.0 | 9.0 | 8.0 | 26.0 | 1370 |
| 24 x 1.5 | 12.1 | 14.6 | 9.0 | 8.0 | 7.5 | 28.9 | 1620 |
| 30 x 1.5 | 12.1 | 14.6 | 8.0 | 7.5 | 6.5 | 31.0 | 1850 |
| 37 x 1.5 | 12.1 | 14.6 | 7.5 | 6.5 | 6.0 | 34.0 | 2250 |
| 5 x 2.5 | 7.41 | 8.89 | 24.0 | 20.5 | 18.0 | 17.8 | 600 |
| 7 x 2.5 | 7.41 | 8.89 | 22.0 | 18.5 | 16.0 | 19.2 | 660 |
| 10 x 2.5 | 7.41 | 8.89 | 20.0 | 16.5 | 14.5 | 23.8 | 1660 |
| 12 x 2.5 | 7.41 | 8.89 | 18.0 | 15.5 | 13.5 | 25.0 | 1280 |
| 14 x 2.5 | 7.41 | 8.89 | 16.0 | 14.0 | 12.0 | 26.0 | 1390 |
| 16 x 2.5 | 7.41 | 8.89 | 15.0 | 13.0 | 11.0 | 27.0 | 1510 |
| 19 x 2.5 | 7.41 | 8.89 | 14.0 | 12.0 | 10.5 | 28.3 | 1670 |
| 24 x 2.5 | 7.41 | 8.89 | 13.0 | 11.0 | 9.5 | 31.4 | 2030 |
| 30 x 2.5 | 7.41 | 8.89 | 11.5 | 10.0 | 8.5 | 34.5 | 2450 |
| 37 x 2.5 | 7.41 | 8.89 | 10.0 | 9.0 | 7.5 | 37.4 | 2870 |
| 5 x 4 | 4.61 | 5.51 | 31.0 | 25.5 | 24.0 | 20.8 | 780 |
| 7 x 4 | 4.61 | 5.51 | 28.0 | 23.0 | 21.5 | 23.5 | 1190 |
| 10 x 4 | 4.61 | 5.51 | 25.0 | 21.0 | 19.5 | 27.2 | 1510 |
| 12 x 4 | 4.61 | 5.51 | 23.0 | 19.5 | 18.0 | 29.0 | 1700 |
| 14 x 4 | 4.61 | 5.51 | 20.5 | 17.0 | 16.0 | 30.0 | 1850 |
| 16 x 4 | 4.61 | 5.51 | 19.5 | 16.0 | 15.0 | 31.6 | 2040 |
| 19 x 4 | 4.61 | 5.51 | 18.0 | 15.0 | 14.0 | 33.0 | 2260 |
| 24 x 4 | 4.61 | 5.51 | 16.0 | 13.5 | 12.5 | 38.4 | 3070 |
| 30 x 4 | 4.61 | 5.51 | 14.5 | 12.0 | 11.0 | 41.3 | 3560 |
| 37 x 4 | 4.61 | 5.51 | 13.0 | 11.0 | 10.0 | 43.2 | 4120 |

SELCOPLAST CABLES



SPECIAL CABLES

SELCOPLAST CABLES



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SELCOPLAST CABLES



CO-AXIAL MATV CABLES



| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

RG-59/ U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|-----|--------------------|-------------------------|------------|------|--|--------------|------|-----------|-----------|-------------------|--|--|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| CUWLD | 20 | 1 X 0.81 | 147.2 | FPE | 3.71 | 100% AMT and 40% Al wire braid 55.8 Ω / Km | PVC BLACK | 6.16 | 75 | 53.1 | 82 | 1 10 50 100 200 400 700 900 1000 | 2.0 3.3 5.9 8.2 11.5 16.1 21.3 24.3 25.9 |

RG-6 / U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|-----|--------------------|-------------------------|------------|------|--|--------------|-----|-----------|-----------|-------------------|--|---|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| CUWLD | 18 | 1 X 1.02 | 93.1 | FPE | 4.50 | 100% AMT and 40% Al wire braid 38.1 Ω / Km | PVC BLACK | 7.0 | 75 | 53.1 | 82 | 1 10 50 100 200 400 700 900 1000 | 1.6 3.0 4.9 6.6 9.2 13.1 17.4 20.0 21.3 |

RG-11/ U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|-----|--------------------|-------------------------|------------|------|--|--------------|------|-----------|-----------|-------------------|--|--|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| CUWLD | 14 | 1 X 1.63 | 36.3 | FPE | 7.25 | 100% AMT and 40% Al wire braid 17.4 Ω / Km | PVC BLACK | 10.3 | 75 | 53.1 | 82 | 1 10 50 100 200 400 700 900 1000 | 1.0 2.0 3.0 3.9 5.6 7.9 11.5 12.5 13.1 |

SELCOPLAST CABLES



COAXIAL CATV CABLES



| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

RG-59/U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|-----------|------------|-----------|-----------|-------------------|---------------------|---------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/100m |
| CUWLD | 20 | 1 X 0.81 | 147.2 | FPE | 3.71 | 100% AMT and 67% Al wire braid 36.3 Ω / Km | PVC BLACK | 6.16 | 75 | 53.1 | 82 | 1 | 2.0 |
| | | | | | | | | | | | | 10 | 3.3 |
| | | | | | | | | | | | | 50 | 5.9 |
| | | | | | | | | | | | | 100 | 8.2 |
| | | | | | | | | | | | | 200 | 11.5 |
| | | | | | | | | | | | | 400 | 16.1 |
| | | | | | | | | | | | | 700 | 21.3 |
| | | | | | | | | | | | | 900 | 24.3 |
| 1000 | 25.9 | | | | | | | | | | | | |

RG6/U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|-----------|------------|-----------|-----------|-------------------|---------------------|---------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/100m |
| CUWLD | 18 | 1 X 1.02 | 93.1 | FPE | 4.59 | 100% AMT and 61% Al wire braid 33.1 Ω / Km | PVC BLACK | 7.0 | 75 | 53.1 | 82 | 1 | 1.6 |
| | | | | | | | | | | | | 10 | 3.0 |
| | | | | | | | | | | | | 50 | 4.9 |
| | | | | | | | | | | | | 100 | 6.6 |
| | | | | | | | | | | | | 200 | 9.2 |
| | | | | | | | | | | | | 400 | 13.1 |
| | | | | | | | | | | | | 700 | 17.4 |
| | | | | | | | | | | | | 900 | 20.0 |
| 1000 | 21.3 | | | | | | | | | | | | |

RG11/U

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|-----------|------------|-----------|-----------|-------------------|---------------------|---------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/100m |
| CUWLD | 14 | 1 X 1.63 | 36.3 | FPE | 7.25 | 100% AMT and 61% Al wire braid 23.4 Ω / Km | PVC BLACK | 10.3 | 75 | 53.1 | 82 | 1 | 1.0 |
| | | | | | | | | | | | | 10 | 2.0 |
| | | | | | | | | | | | | 50 | 3.0 |
| | | | | | | | | | | | | 100 | 3.9 |
| | | | | | | | | | | | | 200 | 5.6 |
| | | | | | | | | | | | | 400 | 7.9 |
| | | | | | | | | | | | | 700 | 11.5 |
| | | | | | | | | | | | | 900 | 12.5 |
| 1000 | 13.1 | | | | | | | | | | | | |

SELCOPLAST CABLES



COAXIAL MIL SPEC CABLES TO MIL-C-17G

CO-AXIAL CABLE 50 OHMS

LEGEND:

| | | |
|-------|---|-----------------------------------|
| BC | ⇒ | Bare Copper |
| TC | ⇒ | Tinned Copper |
| CUWLD | ⇒ | Copper Covered Steel (copperweld) |
| PE | ⇒ | Solid Polyethylene |
| FPE | ⇒ | Cellular (Foam) Polyethylene |
| AL | ⇒ | Aluminum |
| AMT | ⇒ | Aluminum Mylar Tape |
| PVC | ⇒ | Polyvinyl Chloride |

RG-58 C/U, MIL-C-17G

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|--------------|------------|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Mat'l's | Dia. mm | ohm | pF/m | % | MHz | db / 100m |
| TC | 20 | 19 X 0.18 | 35.4 | PE | 2.95 | TC braid 96% 13.4 Ω / Km | PVC BLACK | 4.9 | 50 | 101.0 | 66 | 1 | 1.4 |
| | | | | | | | | | | | | 10 | 4.8 |
| | | | | | | | | | | | | 50 | 10.8 |
| | | | | | | | | | | | | 100 | 16.1 |
| | | | | | | | | | | | | 200 | 23.9 |
| | | | | | | | | | | | | 400 | 37.7 |
| | | | | | | | | | | | | 700 | 55.8 |
| | | | | | | | | | | | | 900 | 65.6 |
| 1000 | 70.5 | | | | | | | | | | | | |

RG-213/U, MIL-C-17G 30V 60°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|--------------|------------|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Mat'l's | Dia. mm | ohm | pF/m | % | MHz | db / 100m |
| BC | 13 | 7 X 0.76 | 5.6 | PE | 7.25 | BC braid 96% 3.9 Ω / Km | PVC BLACK | 10.3 | 50 | 101.1 | 66 | 1 | 0.6 |
| | | | | | | | | | | | | 10 | 2.0 |
| | | | | | | | | | | | | 50 | 4.9 |
| | | | | | | | | | | | | 100 | 6.9 |
| | | | | | | | | | | | | 200 | 9.8 |
| | | | | | | | | | | | | 400 | 15.7 |
| | | | | | | | | | | | | 700 | 21.3 |
| | | | | | | | | | | | | 900 | 24.9 |
| 1000 | 26.9 | | | | | | | | | | | | |

RG-216, MIL-C-17G 85°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|----------------------------------|------------|-----------------|---|--------------|------------|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20°C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance ohm/Km | Mat'l's | Dia. mm | ohm | pF/m | % | MHz | db / 100m |
| TC | 18 | 7 X 0.4 | 20.0 | PE | 7.25 | 2 BC braids 95% 2.6 Ω / Km | PVC BLACK | 10.80 | 75 | 67.3 | 66 | 1 | 0.62 |
| | | | | | | | | | | | | 10 | 2.2 |
| | | | | | | | | | | | | 50 | 4.3 |
| | | | | | | | | | | | | 100 | 6.6 |
| | | | | | | | | | | | | 200 | 9.5 |
| | | | | | | | | | | | | 400 | 13.8 |
| | | | | | | | | | | | | 700 | 19.0 |
| | | | | | | | | | | | | 900 | 22.3 |
| 1000 | 23.3 | | | | | | | | | | | | |

SELCOPLAST CABLES



COAXIAL

COMMERCIAL 50 ohm TRANSMISSION AND COMPUTER CABLES



| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

RG-58/U, NEC Type CL 2 30 V 80°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|-----------------------------------|------------|-----------------|---|--------------|------------|-----------|-----------|-------------------|---------------------|----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/ 100m |
| TC | 20 | 19 X 0.18 | 35.4 | PE | 2.95 | TC braid 96% 13.4 Ω / Km | PVC BLACK | 4.9 | 50 | 101.0 | 66 | 1 | 1.4 |
| | | | | | | | | | | | | 10 | 4.6 |
| | | | | | | | | | | | | 50 | 10.8 |
| | | | | | | | | | | | | 100 | 16.1 |
| | | | | | | | | | | | | 200 | 23.9 |
| | | | | | | | | | | | | 400 | 37.7 |
| | | | | | | | | | | | | 700 | 55.8 |
| 900 | 65.8 | | | | | | | | | | | | |
| 1000 | 70.5 | | | | | | | | | | | | |

RG-58/U. NEC Type CL 2X-30V 80°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|-----------------------------------|------------|-----------------|---|--------------|------------|-----------|-----------|-------------------|---------------------|----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/ 100m |
| BC | 20 | 1 x 0.82 | 32.8 | PE | 2.95 | TC braid 96% 13.4 Ω / Km | PVC BLACK | 4.9 | 53 | 93 | 66 | 1 | 1.1 |
| | | | | | | | | | | | | 10 | 3.9 |
| | | | | | | | | | | | | 50 | 10.2 |
| | | | | | | | | | | | | 100 | 14.8 |
| | | | | | | | | | | | | 200 | 22.3 |
| | | | | | | | | | | | | 400 | 32.8 |
| | | | | | | | | | | | | 700 | 45.9 |
| 900 | 52.5 | | | | | | | | | | | | |
| 1000 | 55.8 | | | | | | | | | | | | |

RG-8/U, NEC Type CL 2 30 V 80°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------------------|-----------------------------------|------------|-----------------|--|--------------|------------|-----------|-----------|-------------------|---------------------|----------|
| Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | ohm | pF/m | % | MHz | db/ 100m |
| BC | 10 | 1 X 2.60 | 3.9 | FPE | 7.25 | 100% AMT and 95% TC braid 3.6 Ω / Km | PVC BLACK | 10.3 | 50 | 85.3 | 78 | 1 | 0.3 |
| | | | | | | | | | | | | 10 | 1.6 |
| | | | | | | | | | | | | 50 | 3.6 |
| | | | | | | | | | | | | 100 | 5.2 |
| | | | | | | | | | | | | 200 | 7.9 |
| | | | | | | | | | | | | 400 | 11.5 |
| | | | | | | | | | | | | 700 | 16.4 |
| 900 | 18.7 | | | | | | | | | | | | |
| 1000 | 19.7 | | | | | | | | | | | | |
| 4000 | 42.6 | | | | | | | | | | | | |

SELCOPLAST CABLES



COAXIAL INDUSRIAL TWINAX CABLES 600V



TWINAX CABLE 600V

| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

78 OHM DATA CABLE, UL-1277 Type TC 75°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------|------------------------|---|------|--|---------------------|-----|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20°C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| TC | 18 | 7 X 0.39 | 22.7 | PE COLOR CODED BLUE & WHITE | 4.90 | 100% AMT and 55% TC braid 102 Ω / Km | PVC DARK BLUE | 8.0 | 78 | 70.1 | 66 | 1 | 2.3 |
| | | | | | | | | | | | | 10 | 6.6 |
| | | | | | | | | | | | | 50 | 12.5 |
| | | | | | | | | | | | | 100 | 18.0 |
| | | | | | | | | | | | | 200 | 25.6 |
| 400 | 35.4 | | | | | | | | | | | | |

100 OHM DATA CABLE, UL-1277 Type TC 75°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------|------------------------|---|------|--|---------------------|-----|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20°C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| TC | 18 | 7 X 0.39 | 22.7 | PE COLOR CODED BLUE & WHITE | 6.26 | 100% AMT and 55% TC braid 9.1 Ω / Km | PVC DARK BLUE | 9.4 | 100 | 55.3 | 66 | 1 | 1.8 |
| | | | | | | | | | | | | 10 | 5.2 |
| | | | | | | | | | | | | 50 | 9.8 |
| | | | | | | | | | | | | 100 | 14.2 |
| | | | | | | | | | | | | 200 | 20.1 |
| 400 | 24.4 | | | | | | | | | | | | |

124 OHM DATA CABLE, UL-1277 Type TC 75°C

| Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|-----------|------|--------------------|------------------------|---|------|--|---------------------|------|-----------|-----------|-------------------|---------------------|-----------|
| Material | AWG | Strands X diameter | Nom. D.C. Res. at 20°C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| TC | 18 | 7 X 0.39 | 22.7 | PE COLOR CODED BLUE & WHITE | 8.34 | 100% AMT and 55% TC braid 8.2 Ω / Km | PVC DARK BLUE | 10.5 | 124 | 44.5 | 66 | 1 | 1.5 |
| | | | | | | | | | | | | 10 | 3.9 |
| | | | | | | | | | | | | 50 | 7.9 |
| | | | | | | | | | | | | 100 | 11.4 |
| | | | | | | | | | | | | 200 | 16.2 |
| 400 | 22.4 | | | | | | | | | | | | |

SELCOPLAST CABLES



LOCAL AREA NETWORK CABLE - LAN EIA / TIA 568-A & UL-444



Cables are available in category 3, category 4 and category 5e performance defined as per EIA / TIA 568-A. Category 3 cables are used for data transmission rate of 16MB/S, category 4 cables upto 20 MB/S and category 5e cables upto 150 MB/S.

Construction

24 AWG solid bare copper conductor insulated with solid polyethylene. Colour coded cores twisted into pairs and cabled together. Gray outer jacket of PVC as per UL-444. UL LISTED TYPE CM.

Packing: Available in 1000 Ft. (305 Mt.) length on reels.

COLOUR CODE

| Pairs | A | B |
|-------|---------------------|--------|
| 1 | White/Blue Stripe | Blue |
| 2 | White/Orange Stripe | Orange |
| 3 | White/Green Stripe | Green |
| 4 | White/Brown Stripe | Brown |

SIZE : 4 PAIR 24 AWG

| Category & MESC Code | Conductor Dia. mm | Insulation Thickness mm | Jacket Thickness mm | Nominal O.D. mm | Standard Length mm | Approx. Weight Kg |
|---------------------------------------|-------------------|-------------------------|---------------------|-----------------|--------------------|-------------------|
| Category - 3 M712-04P24AWG-U00Y-3 | 0.51 | 0.17 | 0.6 | 5.0 | 305 | 9.1 |
| Category - 4 M912-04P24AWG-U00Y-3 | 0.51 | 0.17 | 0.6 | 5.3 | 305 | 9.8 |
| Category - 5e M612-04P24AWG-U00Y-M | 0.51 | 0.17 | 0.6 | 5.3 | 305 | 9.8 |

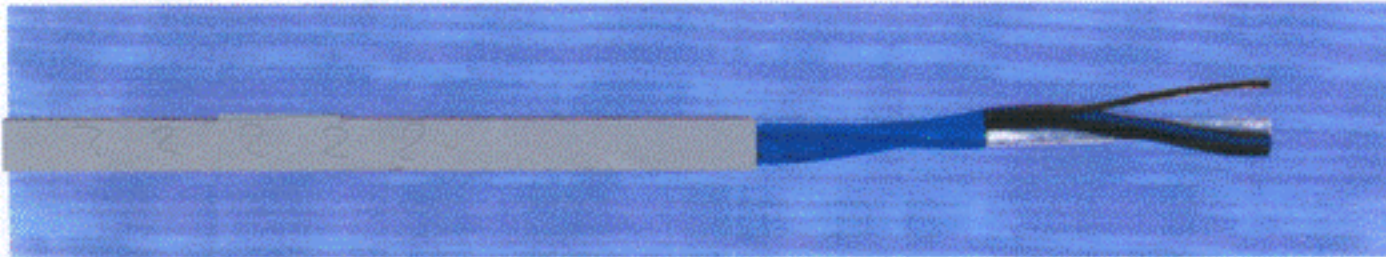
PERFORMANCE SPECIFICATION AS PER EIA/TIA 568-A

| | Category - 3 | Category - 4 | Category - 5e |
|----------------------------------|---|---|---|
| D.C. Resistance at 20°C (Ω /Km) | 93.8 | 93.8 | 93.8 |
| Impedance (Ω) | 100 ± 15 (1 - 16 MHz) | 100 ± 15 (1 - 16 MHz) | 100 ± 15 (1 - 16 MHz) |
| Nominal Capacitance (pF/m) | 52.5 | 52.5 | 46 |
| Max. Attenuation (dB/100Mtr) | 1 MHz: 2.6 4 MHz: 5.6 10 MHz: 9.8 16 MHz: 13.1 20 MHz: - 31.5 MHz: - 100 MHz: - | 1 MHz: 2.1 4 MHz: 4.3 10 MHz: 7.2 16 MHz: 8.9 20 MHz: 10.2 31.5 MHz: - 100 MHz: - | 1 MHz: 2.1 4 MHz: 4.3 10 MHz: 6.6 16 MHz: 8.2 20 MHz: 9.2 31.5 MHz: 11.8 100 MHz: 22.0 |
| Max. Crosstalk (dB/100Mtr) | 1 MHz: 41 4 MHz: 32 10 MHz: 26 16 MHz: 23 20 MHz: - 31.5 MHz: - 100 MHz: - | 1 MHz: 56 4 MHz: 47 10 MHz: 41 16 MHz: 38 20 MHz: 36 31.5 MHz: - 100 MHz: - | 1 MHz: 65.3 4 MHz: 56.3 10 MHz: 50.3 16 MHz: 47.3 20 MHz: 45.8 31.5 MHz: 42.9 100 MHz: 35.3 |
| N.E.X.T. | | | |

SELCOPLAST CABLES



COMPUTER CABLES EIA RS-232 APPLICATIONS (UL 2464)



Application : These cables are used for computer inter-connections, EIA RS-232 and CAD/CAM systems.

Construction

- **Conductor** : Stranded Tinned Copper .
- **Insulation** : Semi-rigid PVC.
- **Assembly** : Colour coded cores are twisted into pairs with staggered lay technique and cabled together. The colour code is as per Table 1. The assembly is covered with a non-hygroscopic tape.
- **Screen** : An Aluminium Polyester tape is applied with a stranded tinned copper drain wire (24 AWG) either longitudinally or helically with a suitable overlap for 100% shield coverage.
- **Jacket** : Grey coloured PVC.

Technical Data

| Specification | UL 2464 |
|---|------------------|
| Temperature Range | - 20°C to + 80°C |
| Operating Voltage | 300 V |
| Max. Cond. Resistance at 20°C (Ω /Km) | 90.9 |
| Nom. Mutual Capacitance (pF/m) | 98 |
| Nom. Cond. / Shield Capacitance (pF/m) | 164 |
| Nom. Impedance (Ω) | 75 |

**COMPUTER CABLES
EIA RS-232 APPLICATIONS
UL 2464**

| Size AWG | Pairs Nos. | Strands x Dia. No. x mm | Insulation Thickness mm | Nominal Jacket Thickness mm | Approx. O. D. mm | Approx. Weight Kg/Km |
|-------------|---------------|-------------------------------|-------------------------------|-----------------------------------|------------------------|----------------------------|
| 24 | 1 | 7 x 0.2 | 0.25 | 0.81 | 4.4 | 25 |
| | 2 | 7 x 0.2 | 0.25 | 0.81 | 5.7 | 39 |
| | 3 | 7 x 0.2 | 0.25 | 0.81 | 5.9 | 46 |
| | 4 | 7 x 0.2 | 0.25 | 0.81 | 6.5 | 55 |
| | 5 | 7 x 0.2 | 0.25 | 0.89 | 7.2 | 67 |
| | 6 | 7 x 0.2 | 0.25 | 0.89 | 7.7 | 76 |
| | 7 | 7 x 0.2 | 0.25 | 0.89 | 8.1 | 85 |
| | 8 | 7 x 0.2 | 0.25 | 0.89 | 8.5 | 93 |
| | 9 | 7 x 0.2 | 0.25 | 0.94 | 9.0 | 104 |
| | 10 | 7 x 0.2 | 0.25 | 1.02 | 9.6 | 116 |
| | 15 | 7 x 0.2 | 0.25 | 1.02 | 11.2 | 157 |
| 19 | 7 x 0.2 | 0.25 | 1.02 | 12.2 | 189 | |
| 25 | 7 x 0.2 | 0.25 | 1.14 | 13.9 | 243 | |

COLOUR CODE

TABLE 1

| No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire |
|-----------------|--------|--------|-----------------|--------|--------|-----------------|--------|--------|
| 1 | White | Blue | 11 | Black | Blue | 21 | Purple | Blue |
| 2 | White | Orange | 12 | Black | Orange | 22 | Purple | Orange |
| 3 | White | Green | 13 | Black | Green | 23 | Purple | Green |
| 4 | White | Brown | 14 | Black | Brown | 24 | Purple | Brown |
| 5 | White | Grey | 15 | Black | Grey | 25 | Purple | Grey |
| 6 | Red | Blue | 16 | Yellow | Blue | | | |
| 7 | Red | Orange | 17 | Yellow | Orange | | | |
| 8 | Red | Green | 18 | Yellow | Green | | | |
| 9 | Red | Brown | 19 | Yellow | Brown | | | |
| 10 | Red | Grey | 20 | Yellow | Grey | | | |

SELCOPLAST CABLES



COMPUTER CABLES LOW CAPACITANCE, FOR EIA RS-232 APPLICATIONS (UL 2919)



Application : External Inter-connection of computer and electronic equipment where high levels of noise interference is anticipated. Also used for precision audio, pulse or R.F. signal transmission where low distortion and high speed datarates are required.

Construction

- **Conductor** : Stranded Tinned Copper.
- **Insulation** : Colour Coded Polyethylene.
- **Assembly** : Pairs twisted with staggered lay scheme are cabled and covered with a non-hygroscopic tape. The colour code is as per table 1.
- **Screen** : An Aluminium Polyester tape with a stranded tinned copper drain wire (24 AWG) is applied either longitudinally or helically with a suitable overlap for 100% shield coverage.
- **Jacket** : Grey Coloured PVC.

Technical Data

| | |
|---------------------------------------|------------------|
| Specification | UL 2919 |
| Operating Temperature | - 20°C to + 80°C |
| Operating Voltage | 30 V (UL) |
| Max. Cond. Resistance at 20°C (Ω /Km) | 90.9 |
| Nom. Mutual Capacitance (pF/m) | 50.8 |
| Nom. Cond./ Shield Capacitance (pFm) | 90.2 |
| Nom. Impedance (Ω) | 100 |
| Nom. Velocity of Propagation (%) | 66 |

SELCOPLAST CABLES



COMPUTER CABLES LOW CAPACITANCE, FOR EIA RS-232 APPLICATIONS (UL 2919)

| Size AWG | Pairs Nos. | Strands x Dia. No. x mm | Insulation Thickness mm | Nominal Jacket Thickness mm | Approx. O. D. mm | Approx. Weight Kg/Km |
|-------------|---------------|-------------------------------|-------------------------------|-----------------------------------|------------------------|----------------------------|
| 24 | 3 | 7 x 0.2 | 0.25 | 0.89 | 6.4 | 49 |
| | 4 | 7 x 0.2 | 0.25 | 0.89 | 7.1 | 58 |
| | 6 | 7 x 0.2 | 0.25 | 0.89 | 8.2 | 75 |
| | 7 | 7 x 0.2 | 0.25 | 0.89 | 8.7 | 84 |
| | 9 | 7 x 0.2 | 0.25 | 0.89 | 9.5 | 100 |
| | 12 | 7 x 0.2 | 0.25 | 0.89 | 10.6 | 124 |
| | 18 | 7 x 0.2 | 0.25 | 0.89 | 12.5 | 168 |
| | 25 | 7 x 0.2 | 0.25 | 1.14 | 14.9 | 237 |

COLOUR CODE

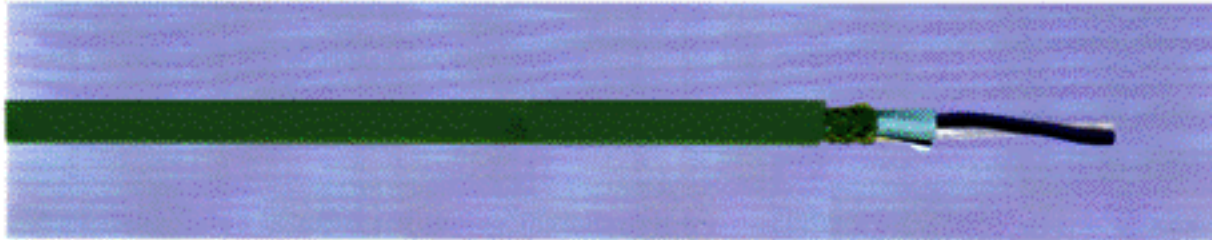
TABLE 1

| No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire |
|-----------------|--------|--------|-----------------|--------|--------|-----------------|--------|--------|
| 1 | White | Blue | 11 | Black | Blue | 21 | Purple | Blue |
| 2 | White | Orange | 12 | Black | Orange | 22 | Purple | Orange |
| 3 | White | Green | 13 | Black | Green | 23 | Purple | Green |
| 4 | White | Brown | 14 | Black | Brown | 24 | Purple | Brown |
| 5 | White | Grey | 15 | Black | Grey | 25 | Purple | Grey |
| 6 | Red | Blue | 16 | Yellow | Blue | | | |
| 7 | Red | Orange | 17 | Yellow | Orange | | | |
| 8 | Red | Green | 18 | Yellow | Green | | | |
| 9 | Red | Brown | 19 | Yellow | Brown | | | |
| 10 | Red | Grey | 20 | Yellow | Grey | | | |

SELCOPLAST CABLES



COMPUTER CABLES LOW CAPACITANCE, FOR EIA RS-422 APPLICATIONS (UL 2919)



Application : External Inter-connection of computer and electronic equipment where high levels of noise interference is anticipated. Also used for precision audio, pulse or R.F. signal transmission where low distortion and high speed data rates are required.

Construction

- **Conductor** : Stranded Tinned Copper.
- **Insulation** : Colour Coded Polyethylene.
- **Assembly** : Pairs twisted with staggered lay scheme are cabled and covered with a non-hygroscopic tape. The colour code as per Table 1.
- **Screen** : An Aluminium Mylar tape is applied with a stranded tinned copper drain wire in continuous contact with aluminium part. Over the aluminium tape shield an overall braid with tinned copper wires is applied with 65% coverage.
- **Jacket** : Grey Coloured PVC.

Technical Data

| | |
|---------------------------------------|------------------|
| Specification | UL 2919 |
| Operating Temperature | - 20°C to + 80°C |
| Operating Voltage | 30 V (UL) |
| Max. Cond. Resistance at 20°C (Ω/Km) | 90.9 |
| Nom. Mutual Capacitance (pF/m) | 50.8 |
| Nom. Cond./Shield Capacitance (pF/m) | 90.2 |
| Nom. Impedance (Ω) | 100 |
| Nom. Velocity of Propagation (%) | 66 |

SELCOPLAST CABLES



COMPUTER CABLES LOW CAPACITANCE, FOR EIA RS-422 APPLICATIONS (UL 2919)

| Size Pairs | Strands x Dia. | Nominal Jacket Thickness | Approx. O. D. | Approx. Weight |
|------------|----------------|--------------------------|---------------|----------------|
| AWG Nos. | No. x mm | mm | mm | Kg/Km |
| 2 | 7 x 0.2 | 0.89 | 7.4 | 61 |
| 3 | 7 x 0.2 | 0.89 | 7.7 | 69 |
| 4 | 7 x 0.2 | 0.89 | 7.9 | 77 |
| 5 | 7 x 0.2 | 0.89 | 8.5 | 88 |
| 6 | 7 x 0.2 | 0.89 | 9.5 | 102 |
| 24 7 | 7 x 0.2 | 0.89 | 9.5 | 108 |
| 9 | 7 x 0.2 | 0.89 | 10.4 | 127 |
| 10 | 7 x 0.2 | 0.89 | 10.8 | 136 |
| 12 | 7 x 0.2 | 0.89 | 11.6 | 154 |
| 18 | 7 x 0.2 | 0.89 | 13.5 | 205 |
| 25 | 7 x 0.2 | 1.14 | 15.9 | 280 |

COLOUR CODE

TABLE 1

| No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire |
|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| 1 | White | Blue | 11 | Black | Blue | 21 | Purple | Blue |
| 2 | White | Orange | 12 | Black | Orange | 22 | Purple | Orange |
| 3 | White | Green | 13 | Black | Green | 23 | Purple | Green |
| 4 | White | Brown | 14 | Black | Brown | 24 | Purple | Brown |
| 5 | White | Grey | 15 | Black | Grey | 25 | Purple | Grey |
| 6 | Red | Blue | 16 | Yellow | Blue | | | |
| 7 | Red | Orange | 17 | Yellow | Orange | | | |
| 8 | Red | Green | 18 | Yellow | Green | | | |
| 9 | Red | Brown | 19 | Yellow | Brown | | | |
| 10 | Red | Grey | 20 | Yellow | Grey | | | |

SELCOPLAST CABLES



TELEPHONE CABLE FOR INSTALLATION WITHIN BUILDINGS (IEC 189-2)



Colour Code

Table 1

Colour Code of unit binding

| No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire | Unit No. | Colour of Bindings |
|--------------|--------|--------|--------------|--------|--------|----------|--------------------|
| 1 | White | Blue | 11 | Black | Blue | 1 | Blue |
| 2 | White | Orange | 12 | Black | Orange | 2 | Orange |
| 3 | White | Green | 13 | Black | Green | 3 | Green |
| 4 | White | Brown | 14 | Black | Brown | 4 | Brown |
| 5 | White | Grey | 15 | Black | Grey | 5 | Grey |
| 6 | Red | Blue | 16 | Yellow | Blue | 6 | White |
| 7 | Red | Orange | 17 | Yellow | Orange | 7 | Red |
| 8 | Red | Green | 18 | Yellow | Green | 8 | Black |
| 9 | Red | Brown | 19 | Yellow | Brown | 9 | Yellow |
| 10 | Red | Grey | 20 | Yellow | Grey | 10 | Violet |

* Unshielded cables also supplied on request.

Application : This cable is used for inside installation for the inter-connection of the transmission, telephone, telegraph and electronic equipment for data processing.

Construction

- **Conductor** : Solid annealed plain copper wire *
- **Insulation** : PVC compound as per IEC 189-2. Colour code as given in Table 1.
- **Assembly** : Cores twisted into pairs and pairs are stranded into units of 10 or 20 pairs and units are cabled together. The assembly is covered with a non-hygroscopic tape.
- **Screen *** : An Aluminium Polyester tape is applied longitudinally or helically with a suitable overlap and a solid tinned copper drain wire (0.4 mm) in continuous contact with the Aluminium part of the screen.
- **Sheath** : Grey coloured PVC as per IEC 189-2. A Nylon rip cord is provided under the sheath for easy stripping.

Technical Data

| Specification | IEC 189-2 | | | |
|--|-----------------|------|------|------|
| Temperature Range | | | | |
| | | | | |
| Flexing | - 5°C to + 50°C | | | |
| Conductor Dia (mm) | 0.4 | 0.5 | 0.6 | 0.8 |
| Max. Cond. Resistance at 20°C (Ω/Km) | 153.0 | 97.8 | 67.9 | 37.5 |
| Test Voltage Kv (DC) / 1 Minute | 1.5 | | 2.25 | |
| Mutual Capacitance at 1 KHz (nF/Km) | Ind. Max. 120 | | | |
| Capacitance Unbalance between pair to pair at 1 KHz (pF/500 Mtr) | Ind. Max. 400 | | | |

* Tinned Copper can be supplied on demand

SELCOPLAST CABLES



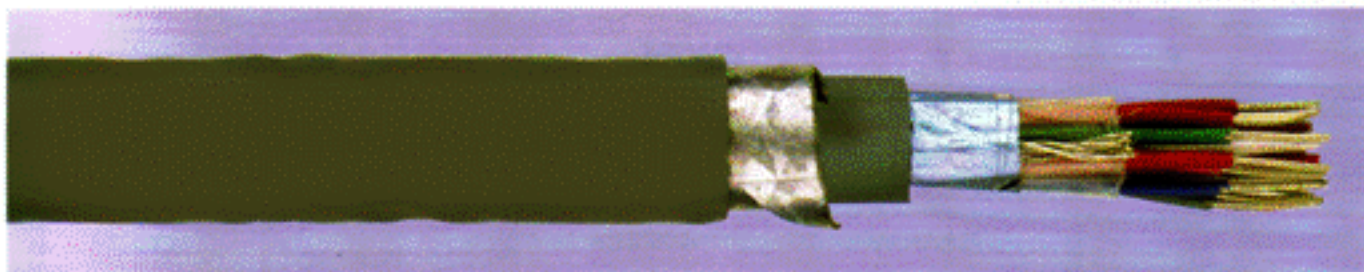
TELEPHONE CABLE FOR INSTALLATION WITHIN BUILDINGS (IEC 189-2)

| SIZE mm | PAIRS Nos. | STRANDS X DIA. No. x mm | INSULATION THICKNESS mm | SHEATH THICKNESS. mm | APPROX. O.D. mm | APPROX. WEIGHT Kg/Km |
|------------|---------------|----------------------------|-------------------------------|----------------------------|-----------------------|----------------------------|
| 0.4 | 1 | 1 x 0.4 | 0.20 | 0.6 | 3.0 | 12 |
| | 2 | 1 x 0.4 | 0.20 | 0.6 | 4.1 | 19 |
| | 3 | 1 x 0.4 | 0.20 | 0.6 | 4.2 | 23 |
| | 4 | 1 x 0.4 | 0.20 | 0.6 | 4.6 | 28 |
| | 5 | 1 x 0.4 | 0.20 | 0.6 | 5.0 | 33 |
| | 6 | 1 x 0.4 | 0.20 | 0.7 | 5.6 | 40 |
| | 7 | 1 x 0.4 | 0.20 | 0.7 | 5.9 | 44 |
| | 10 | 1 x 0.4 | 0.20 | 0.7 | 6.7 | 57 |
| | 15 | 1 x 0.4 | 0.20 | 0.7 | 7.9 | 79 |
| | 20 | 1 x 0.4 | 0.20 | 0.8 | 9.1 | 104 |
| | 25 | 1 x 0.4 | 0.20 | 0.8 | 10.0 | 125 |
| | 30 | 1 x 0.4 | 0.20 | 0.8 | 10.7 | 143 |
| | 40 | 1 x 0.4 | 0.20 | 0.9 | 12.4 | 191 |
| | 50 | 1 x 0.4 | 0.20 | 0.9 | 13.6 | 230 |
| 60 | 1 x 0.4 | 0.20 | 0.9 | 14.7 | 269 | |
| 80 | 1 x 0.4 | 0.20 | 1.0 | 16.9 | 354 | |
| 100 | 1 x 0.4 | 0.20 | 1.0 | 18.6 | 429 | |
| 0.5 | 1 | 1 x 0.5 | 0.25 | 0.6 | 3.4 | 16 |
| | 2 | 1 x 0.5 | 0.25 | 0.6 | 4.8 | 26 |
| | 3 | 1 x 0.5 | 0.25 | 0.6 | 4.9 | 32 |
| | 4 | 1 x 0.5 | 0.25 | 0.6 | 5.4 | 38 |
| | 5 | 1 x 0.5 | 0.25 | 0.6 | 5.9 | 45 |
| | 6 | 1 x 0.5 | 0.25 | 0.7 | 6.6 | 56 |
| | 7 | 1 x 0.5 | 0.25 | 0.7 | 7.0 | 63 |
| | 10 | 1 x 0.5 | 0.25 | 0.7 | 8.0 | 82 |
| | 15 | 1 x 0.5 | 0.25 | 0.7 | 9.5 | 114 |
| | 20 | 1 x 0.5 | 0.25 | 0.8 | 10.9 | 149 |
| | 25 | 1 x 0.5 | 0.25 | 0.8 | 12.0 | 180 |
| | 30 | 1 x 0.5 | 0.25 | 0.9 | 13.2 | 217 |
| | 40 | 1 x 0.5 | 0.25 | 0.9 | 14.9 | 277 |
| | 50 | 1 x 0.5 | 0.25 | 0.9 | 16.5 | 339 |
| 60 | 1 x 0.5 | 0.25 | 0.9 | 17.9 | 398 | |
| 80 | 1 x 0.5 | 0.25 | 1.0 | 20.5 | 521 | |
| 100 | 1 x 0.5 | 0.25 | 1.0 | 22.7 | 639 | |
| 0.6 | 1 | 1 x 0.6 | 0.25 | 0.6 | 3.6 | 19 |
| | 2 | 1 x 0.6 | 0.25 | 0.6 | 5.1 | 31 |
| | 3 | 1 x 0.6 | 0.25 | 0.6 | 5.2 | 38 |
| | 4 | 1 x 0.6 | 0.25 | 0.6 | 5.8 | 47 |
| | 5 | 1 x 0.6 | 0.25 | 0.6 | 6.4 | 57 |
| | 6 | 1 x 0.6 | 0.25 | 0.7 | 7.1 | 69 |
| | 7 | 1 x 0.6 | 0.25 | 0.7 | 7.5 | 77 |
| | 10 | 1 x 0.6 | 0.25 | 0.7 | 8.7 | 103 |
| | 15 | 1 x 0.6 | 0.25 | 0.8 | 10.5 | 149 |
| | 20 | 1 x 0.6 | 0.25 | 0.9 | 12.0 | 194 |
| | 25 | 1 x 0.6 | 0.25 | 0.9 | 13.2 | 235 |
| | 30 | 1 x 0.6 | 0.25 | 0.9 | 14.3 | 275 |
| | 40 | 1 x 0.6 | 0.25 | 0.9 | 16.2 | 354 |
| | 50 | 1 x 0.6 | 0.25 | 0.9 | 17.9 | 432 |
| 60 | 1 x 0.6 | 0.25 | 1.0 | 19.6 | 517 | |
| 80 | 1 x 0.6 | 0.25 | 1.0 | 22.3 | 671 | |
| 100 | 1 x 0.6 | 0.25 | 1.2 | 25.1 | 846 | |
| 0.8 | 1 | 1 x 0.8 | 0.30 | 0.7 | 4.4 | 30 |
| | 2 | 1 x 0.8 | 0.30 | 0.7 | 6.4 | 50 |
| | 3 | 1 x 0.8 | 0.30 | 0.7 | 6.5 | 62 |
| | 4 | 1 x 0.8 | 0.30 | 0.7 | 7.3 | 78 |
| | 5 | 1 x 0.8 | 0.30 | 0.7 | 7.9 | 91 |
| | 6 | 1 x 0.8 | 0.30 | 0.9 | 9.0 | 115 |
| | 7 | 1 x 0.8 | 0.30 | 0.9 | 9.5 | 128 |
| | 10 | 1 x 0.8 | 0.30 | 0.9 | 11.0 | 171 |
| | 15 | 1 x 0.8 | 0.30 | 0.9 | 13.1 | 242 |
| | 20 | 1 x 0.8 | 0.30 | 0.9 | 14.8 | 310 |
| | 25 | 1 x 0.8 | 0.30 | 1.0 | 16.5 | 384 |
| | 30 | 1 x 0.8 | 0.30 | 1.0 | 17.9 | 452 |
| | 40 | 1 x 0.8 | 0.30 | 1.0 | 20.3 | 583 |
| | 50 | 1 x 0.8 | 0.30 | 1.2 | 22.9 | 737 |
| 60 | 1 x 0.8 | 0.30 | 1.2 | 24.8 | 866 | |
| 80 | 1 x 0.8 | 0.30 | 1.4 | 28.7 | 1156 | |
| 100 | 1 x 0.8 | 0.30 | 1.4 | 31.7 | 1414 | |

SELCOPLAST CABLES



TELEPHONE CABLE SYT1 & SYT2 (SYCABEL)



Application : These cables are used for private telephone and inter-communication systems, electronic equipment connection and fire alarm systems. SYT1 is an unarmoured cable and SYT2 is an armoured cable.

Construction

- **Conductor** : Solid annealed bare copper wire.
- **Insulation** : PVC compound rated 70°C.
- **Assembly** : Colour coded cores (as per Table 1) twisted into pairs and pairs are stranded into Units. Units are identified by coloured tapes as given in Table 2. Units are cabled together and covered by a non-hygroscopic tape.
- **Shield** : Aluminium Polyester tape with a tinned copper drain wire of 0.5 mm in continuous contact with the Aluminium part.
- **Outer Sheath (SYT1)** : Flame retardant PVC rated 70°C coloured grey. For SYT2 cable the colour of this sheath shall be black.
- **Armour** : Two(2) galvanized steel tapes of nominal thickness of 0.2 mm applied helically.
- **Outer Sheath (SYT2)** : Flame Retardant PVC rated 70°C coloured grey.

Technical Data

| Specification | Inter-professional Specification (SYCABEL) | | |
|---|--|------------------|------|
| Temperature Range: | Stationary | - 30°C to + 70°C | |
| | Flexing | - 5°C to + 50°C | |
| Conductor Dia (mm) | 0.5 | 0.6 | 0.9 |
| Max. Loop. Resistance at 20°C (Ω/Km) | 192 | 133.4 | 59.3 |
| Max. Ins. Resistance at >200 V DC (MΩ/Km) | 500 | | |
| Test Voltage Kv (DC) / 1 Minute | 1.5 | | |
| Max. Mutual Capacitance at 800Hz (nF/Km) | 160 up to 10 pairs & 130 for larger cables | | |
| Max. Capacitance Unbalance between pairs (pF/500 Mtr) | 400 | | |
| Max. Attenuation at 800 Hz at 20°C (dB/Km) | 1.9 | 1.6 | 1.1 |
| Bending Radius | Unarmoured | Armoured | |
| Static | 6 X Cable Ø | 10 X Cable Ø | |
| Dynamic | 12 X Cable Ø | 20 X Cable Ø | |
| * Nominal Impedance at 800 Hz | 530 | 440 | 290 |
| * Crosstalk at 10KHz | 60 | 60 | 60 |

* Not a requirement of SYCABEL Specification.

SELCOPLAST CABLES



TELEPHONE CABLE SYT1 & SYT2 (SYCABEL)

SYT1

| SIZE mm | PAIRS Nos. | STRANDS XDIA. No. x mm | INSULATION THICKNESS mm | SHEATH THICKNESS. mm | APPROX O.D. mm | APPROX. WEIGHT Kg/Km |
|------------|---------------|---------------------------|-------------------------------|----------------------------|----------------------|----------------------------|
| 0.5 | 1 | 1 x 0.5 | 0.25 | 0.8 | 4.0 | 25 |
| | 2 | 1 x 0.5 | 0.25 | 0.8 | 4.8 | 34 |
| | 3 | 1 x 0.5 | 0.25 | 0.8 | 5.4 | 43 |
| | 5 | 1 x 0.5 | 0.25 | 0.8 | 6.4 | 59 |
| | 7 | 1 x 0.5 | 0.25 | 1.0 | 7.7 | 82 |
| | 10 | 1 x 0.5 | 0.25 | 1.0 | 8.7 | 104 |
| | 15 | 1 x 0.5 | 0.25 | 1.0 | 10.1 | 139 |
| | 21 | 1 x 0.5 | 0.25 | 1.2 | 12.0 | 193 |
| | 30 | 1 x 0.5 | 0.25 | 1.2 | 13.8 | 253 |
| | 42 | 1 x 0.5 | 0.25 | 1.2 | 15.8 | 331 |
| | 56 | 1 x 0.5 | 0.25 | 1.2 | 17.8 | 419 |
| 112 | 1 x 0.5 | 0.25 | 1.4 | 24.4 | 787 | |
| 0.6 | 1 | 1 x 0.6 | 0.25 | 0.8 | 4.2 | 28 |
| | 2 | 1 x 0.6 | 0.25 | 0.8 | 5.1 | 39 |
| | 3 | 1 x 0.6 | 0.25 | 0.8 | 5.8 | 50 |
| | 5 | 1 x 0.6 | 0.25 | 1.0 | 7.3 | 78 |
| | 7 | 1 x 0.6 | 0.25 | 1.0 | 8.2 | 97 |
| | 10 | 1 x 0.6 | 0.25 | 1.0 | 9.3 | 125 |
| | 15 | 1 x 0.6 | 0.25 | 1.0 | 10.9 | 170 |
| | 21 | 1 x 0.6 | 0.25 | 1.2 | 12.9 | 236 |
| | 30 | 1 x 0.6 | 0.25 | 1.2 | 14.8 | 313 |
| | 42 | 1 x 0.6 | 0.25 | 1.2 | 17.0 | 414 |
| | 56 | 1 x 0.6 | 0.25 | 1.2 | 19.2 | 528 |
| 112 | 1 x 0.6 | 0.25 | 1.4 | 26.5 | 1000 | |
| 0.9 | 1 | 1 x 0.9 | 0.30 | 0.8 | 5.0 | 39 |
| | 2 | 1 x 0.9 | 0.30 | 1.0 | 6.6 | 67 |
| | 3 | 1 x 0.9 | 0.30 | 1.0 | 7.6 | 88 |
| | 5 | 1 x 0.9 | 0.30 | 1.0 | 9.1 | 126 |
| | 7 | 1 x 0.9 | 0.30 | 1.2 | 10.7 | 175 |
| | 10 | 1 x 0.9 | 0.30 | 1.2 | 12.3 | 230 |
| | 15 | 1 x 0.9 | 0.30 | 1.2 | 14.4 | 319 |
| | 21 | 1 x 0.9 | 0.30 | 1.2 | 16.5 | 422 |
| | 30 | 1 x 0.9 | 0.30 | 1.4 | 19.6 | 595 |
| | 42 | 1 x 0.9 | 0.30 | 1.4 | 22.6 | 798 |
| | 56 | 1 x 0.9 | 0.30 | 1.5 | 25.8 | 1040 |
| 112 | 1 x 0.9 | 0.30 | 1.9 | 35.9 | 2023 | |

SELCOPLAST CABLES



TELEPHONE CABLE SYT1 & SYT2 (SYCABEL)

Table 2

| Unit No. | Colour of Bindings |
|----------|--------------------|
| 1 | White |
| 2 | Blue |
| 3 | Yellow |
| 4 | Brown |
| 5 | Black |
| 6 | Red |
| 7 | Green |
| 8 | Violet |

SYT2

| SIZE mm | PAIRS Nos. | STRANDS XDIA. No. x mm | INSULATION THICKNESS mm | SHEATH THICKNESS. mm | APPROX. O.D. mm | APPROX. WEIGHT Kg/Km |
|------------|---------------|---------------------------|-------------------------------|----------------------------|-----------------------|----------------------------|
| 0.5 | 5 | 1 x 0.5 | 0.25 | 1.0 | 9.3 | 162 |
| | 7 | 1 x 0.5 | 0.25 | 1.0 | 10.6 | 203 |
| | 10 | 1 x 0.5 | 0.25 | 1.0 | 11.6 | 240G |
| | 15 | 1 x 0.5 | 0.25 | 1.0 | 13.0 | 295 |
| | 21 | 1 x 0.5 | 0.25 | 1.2 | 14.9 | 375 |
| | 30 | 1 x 0.5 | 0.25 | 1.2 | 16.7 | 461 |
| | 42 | 1 x 0.5 | 0.25 | 1.2 | 18.9 | 576 |
| | 56 | 1 x 0.5 | 0.25 | 1.2 | 20.9 | 693 |
| 0.6 | 112 | 1 x 0.5 | 0.25 | 1.3 | 27.9 | 1184 |
| | 3 | 1 x 0.6 | 0.25 | 1.0 | 9.4 | 158 |
| | 5 | 1 x 0.6 | 0.25 | 1.0 | 10.2 | 194 |
| | 7 | 1 x 0.6 | 0.25 | 1.0 | 11.1 | 226 |
| | 10 | 1 x 0.6 | 0.25 | 1.0 | 12.2 | 270 |
| | 15 | 1 x 0.6 | 0.25 | 1.0 | 13.8 | 337 |
| | 21 | 1 x 0.6 | 0.25 | 1.0 | 15.8 | 431 |
| | 30 | 1 x 0.6 | 0.25 | 1.0 | 17.7 | 536 |
| 0.9 | 42 | 1 x 0.6 | 0.25 | 1.1 | 20.1 | 677 |
| | 56 | 1 x 0.6 | 0.25 | 1.2 | 22.6 | 834 |
| | 112 | 1 x 0.6 | 0.25 | 1.4 | 30.2 | 1444 |
| | 2 | 1 x 0.9 | 0.30 | 1.0 | 10.8 | 200 |
| | 3 | 1 x 0.9 | 0.30 | 1.0 | 11.4 | 227 |
| | 5 | 1 x 0.9 | 0.30 | 1.0 | 12.0 | 267 |
| | 7 | 1 x 0.9 | 0.30 | 1.0 | 13.6 | 339 |
| | 10 | 1 x 0.9 | 0.30 | 1.0 | 15.2 | 416 |
| 0.9 | 15 | 1 x 0.9 | 0.30 | 1.1 | 17.5 | 543 |
| | 21 | 1 x 0.9 | 0.30 | 1.1 | 19.6 | 667 |
| | 30 | 1 x 0.9 | 0.30 | 1.2 | 22.9 | 906 |
| | 42 | 1 x 0.9 | 0.30 | 1.4 | 26.3 | 1177 |
| | 56 | 1 x 0.9 | 0.30 | 1.4 | 29.5 | 1473 |
| | 112 | 1 x 0.9 | 0.30 | 2.1 | 41.1 | 2751 |

Colour Code

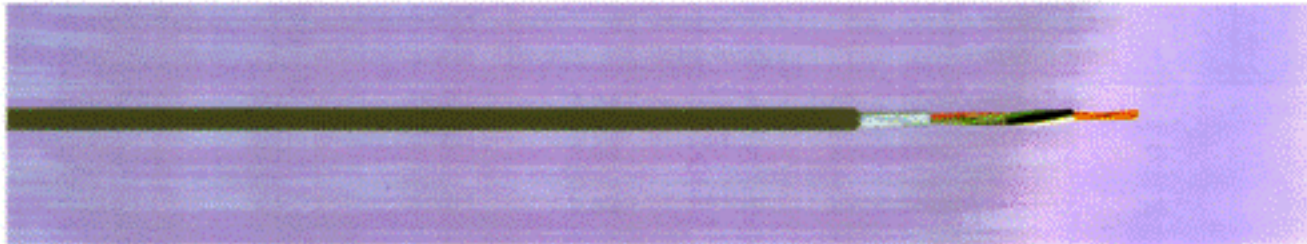
Table 1

| No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire | No. of pairs | a-wire | b-wire |
|--------------|------------|--------|--------------|--------|--------|--------------|--------|--------|
| 1 | Light Blue | White | 11 | Grey | Brown | 21 | Orange | Green |
| 2 | Light Blue | Blue | 12 | Grey | Black | 22 | Purple | White |
| 3 | Light Blue | Yellow | 13 | Grey | Red | 23 | Purple | Blue |
| 4 | Light Blue | Brown | 14 | Grey | Green | 24 | Purple | Yellow |
| 5 | Light Blue | Black | 15 | Orange | White | 25 | Purple | Brown |
| 6 | Light Blue | Red | 16 | Orange | Blue | 26 | Purple | Black |
| 7 | Light Blue | Green | 17 | Orange | Yellow | 27 | Purple | Red |
| 8 | Grey | White | 18 | Orange | Brown | 28 | Purple | Green |
| 9 | Grey | Blue | 19 | Orange | Black | | | |
| 10 | Grey | Yellow | 20 | Orange | Red | | | |

SELCOPLAST CABLES



LOW CAPACITANCE TELEPHONE / DATA CABLE NEC TYPE CM (UL 444)



Application : Can be used as a service and installation cable in data transmission applications, computer, telephone etc.

Specification:UL - 444

Construction

- **Conductor** : Solid Annealed Bare Copper Conductor.
- **Insulation** : Polyethylene core insulation.
- **Assembly** : Pairs twisted with staggered lay technique. Color coding is as per table 1. Twisted pairs are bundled into units of 25 pairs (subunits comprise 12/13 pairs) and cabled and covered with a polyester tape binder.
- **Shield** : The assembly is shielded with Aluminum backed mylar tape with a tinned copper drain wire in contact with the aluminum part of the shield.
- **Jacket** : Gray colored flame retardant PVC.

Technical Data:

| | | | | |
|--|----------------|-----------|------------|-----------|
| 1. Conductor Dia (mm) (AWG) | 0.4 26 | 0.5 24 | 0.64 22 | 0.9 19 |
| 2. Conductor resistance at 20°C (Ω/Km) | 144.4 | 90.2 | 57.1 | 28.5 |
| 3. Average Mutual Capacitance at 1 KHz (nF/Km) | 52 | | | |
| 4. Nom. attenuation at 150 KHz (dB/Km) | 11.4 | 8.30 | 6.20 | 4.40 |
| 5. Impedance (Ω) | 100 ± 15% | | | |
| 6. Min. Insulation resistance (MΩ-Km) | 5000 | | | |
| 7. Dielectric Strength (KV / 2 Sec.) | 2500 | | | |
| 8. Operating Temperature | -20°C to +80°C | | | |

* These cables meet the performance requirement of CAT3 cables as per EIA/TIA 568-A. However the color code of the insulation slightly differs from that of EIA/TIA 568-A.

SELCOPLAST CABLES



LOW CAPACITANCE TELEPHONE / DATA CABLE NEC TYPE CM (UL 444)

| SIZE AWG | PAIRS NOS. | STRANDX DIA NO. X mm | JACKET THICKNESS mm | APPROX. O. D. mm | APPROX. WEIGHT Kg/Km. |
|-------------|---------------|----------------------------|---------------------------|------------------------|-----------------------------|
| 26 | 6 | 1 X 0.4 | 0.58 | 5.3 | 35 |
| | 12 | 1 X 0.4 | 0.58 | 7.0 | 60 |
| | 18 | 1 X 0.4 | 0.58 | 8.2 | 85 |
| | 25 | 1 X 0.4 | 0.58 | 9.5 | 110 |
| | 50 | 1 X 0.4 | 0.81 | 13.4 | 210 |
| | 75 | 1 X 0.4 | 0.81 | 16.0 | 295 |
| | 100 | 1 X 0.4 | 0.81 | 18.2 | 385 |
| | 150 | 1 X 0.4 | 1.14 | 22.6 | 585 |
| 24 | 6 | 1 X 0.5 | 0.58 | 6.0 | 50 |
| | 12 | 1 X 0.5 | 0.58 | 7.9 | 85 |
| | 18 | 1 X 0.5 | 0.58 | 9.4 | 115 |
| | 25 | 1 X 0.5 | 0.69 | 11.1 | 160 |
| | 50 | 1 X 0.5 | 0.81 | 15.4 | 295 |
| | 75 | 1 X 0.5 | 0.81 | 18.4 | 420 |
| | 100 | 1 X 0.5 | 1.14 | 21.7 | 580 |
| | 150 | 1 X 0.5 | 1.14 | 26.0 | 835 |
| 22 | 6 | 1 X 0.64 | 0.58 | 7.4 | 75 |
| | 12 | 1 X 0.64 | 0.69 | 10.1 | 130 |
| | 18 | 1 X 0.64 | 0.81 | 12.3 | 190 |
| | 25 | 1 X 0.64 | 0.81 | 14.2 | 250 |
| | 50 | 1 X 0.64 | 1.14 | 20.0 | 495 |
| | 75 | 1 X 0.64 | 1.14 | 24.0 | 700 |
| | 100 | 1 X 0.64 | 1.14 | 27.3 | 910 |
| | 150 | 1 X 0.64 | 1.40 | 33.5 | 1355 |
| 19 | 6 | 1 X 0.91 | 0.58 | 9.5 | 125 |
| | 12 | 1 X 0.91 | 0.81 | 13.4 | 240 |
| | 18 | 1 X 0.91 | 0.81 | 16.0 | 340 |
| | 25 | 1 X 0.91 | 0.81 | 18.5 | 450 |
| | 50 | 1 X 0.91 | 1.14 | 26.1 | 890 |
| | 75 | 1 X 0.91 | 1.14 | 31.4 | 1285 |
| | 100 | 1 X 0.91 | 1.52 | 36.7 | 1745 |

COLOUR CODE.

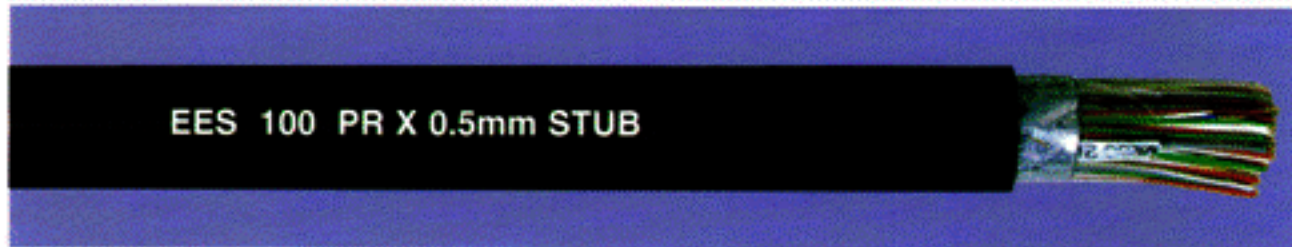
TABLE 1

| No. of Pairs | a-Wire | b-Wire | No. of Pairs | a-Wire | b-Wire | No. of Pairs | a-Wire | b-Wire |
|--------------|--------|--------|--------------|--------|--------|--------------|--------|--------|
| 1 | White | Blue | 9 | Red | Brown | 17 | Yellow | Orange |
| 2 | White | Orange | 10 | Red | Grey | 18 | Yellow | Green |
| 3 | White | Green | 11 | Black | Blue | 19 | Yellow | Brown |
| 4 | White | Brown | 12 | Black | Orange | 20 | Yellow | Grey |
| 5 | White | Grey | 13 | Black | Green | 21 | Violet | Blue |
| 6 | Red | Blue | 14 | Black | Brown | 22 | Violet | Orange |
| 7 | Red | Orange | 15 | Black | Grey | 23 | Violet | Green |
| 8 | Red | Green | 16 | Yellow | Blue | 24 | Violet | Brown |
| | | | | | | 25 | Violet | Grey |

SELCOPLAST CABLES



TELEPHONE CABLE EES TYPE (WITHOUT MOISTURE BARRIER)



Application : Stub Cable is generally used for connection to cabinet and distribution pillar terminal blocks

Specification : STC, MAT 1011 Type : EES

Construction

- **Conductor** : Solid annealed plain copper to ASTM B3.
- **Insulation** : Solid polyethylene to ASTM D1248, Type 3, Category 4 or 5, grade E8 or E9.
- **Conductor Identification** : Insulated conductors shall be fully colour coded in accordance with MAT 1011.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 30 to 200mm to minimize crosstalk. Ten pairs shall be assembled together to form a subunit and each subunit shall have a coloured binder. Subunits shall be assembled as detailed in MAT 1011 to form the cable core.
- **Core Wrapping** : A non-hygroscopic dielectric tape shall be applied longitudinally or helically with an overlap.
- **Sheath** : The sheath shall be an extruded Black low density polyethylene or medium density polyethylene to ASTM D1248, Type 1 or 2, Class C, Category 4 or 5, grade J3.
- **Identification** : A plastic tape durably marked with STC, MESC and year of manufacture shall be placed longitudinally under the core wrap.
- **Sheath Marking** : "The word "STUB" shall be durably marked on the sheath at longitudinal intervals of not more than 1 mtr. Sequentially numbered length marking shall be placed on the sheath at an interval of one meter.

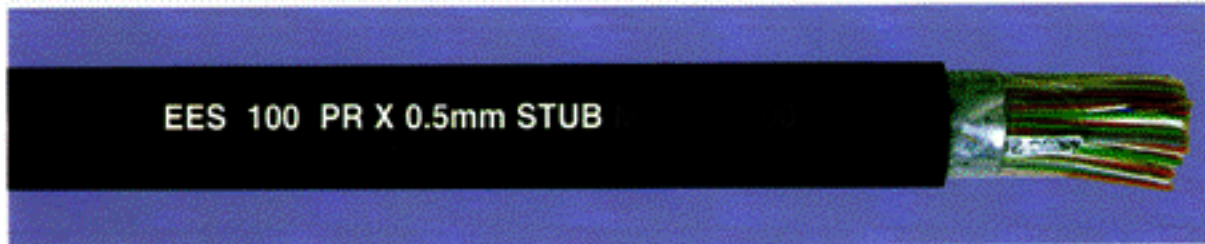
DIMENSIONAL DETAILS

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 0.5 | 10X2X0.5 | 9.7 | 87 | 1000 | 800 |
| | 20X2X0.5 | 12.2 | 146 | 1000 | 900 |
| | 50X2X0.5 | 17.2 | 311 | 1000 | 1100 |
| | 100X2X0.5 | 23.3 | 594 | 1000 | 1250 |

SELCOPLAST CABLES



EES TYPE (WITH MOISTURE BARRIER)



Application : Stub Cable is generally used for connection to cabinet and distribution pillar terminal blocks

Specification : STC, MAT 1011 Type : EES

Construction

- **Conductor** : Solid annealed plain copper to ASTM B3.
- **Insulation** : Solid polyethylene to ASTM D1248, Type 3, Category 4 or 5, grade E8 or E9.
- **Conductor Identification** : Insulated conductors shall be fully colour coded in accordance with MAT 1011.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 30 to 200mm to minimize crosstalk. Ten pairs shall be assembled together to form a subunit and each subunit shall have a coloured binder. Subunits shall be assembled to form units of 50 or 100 pairs depending on the cable size. Such units shall be assembled as detailed in MAT 1011 to form the cable core, alongwith the required spare pairs.
- **Core Wrapping** : A non-hygroscopic dielectric tape shall be applied longitudinally or helically with an overlap.
- **Moisture Barrier/Shield** : An Aluminium tape (0.2mm) coated on both sides with a copolymer shall be applied longitudinally over the core wrap with an overlap of 6mm or 10% of the core circumference whichever is greater.
- **Sheath** : The sheath shall be an extruded Black low density polyethylene or medium density polyethylene to ASTM D1248, Type 1 or 2, Class C, Category 4 or 5, grade J3.
- **Identification** : A plastic tape durably marked with STC, MESC and year of manufacture shall be placed longitudinally under the core wrap.
- **Sheath Marking** : "The word "STUB" shall be durably marked on the sheath at longitudinal intervals of not more than 1 mtr. Sequentially numbered length marking shall be placed on the sheath at an interval of one meter.

DIMENSIONAL DETAILS

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 0.5 | 10X2X0.5 | 11.1 | 113 | 1000 | 800 |
| | 20X2X0.5 | 13.7 | 179 | 1000 | 1000 |
| | 50X2X0.5 | 19.0 | 362 | 1000 | 1100 |
| | 100X2X0.5 | 25.5 | 669 | 1000 | 1400 |
| | 200X2X0.5 | 34.0 | 1234 | 1000 | 1600 |

SELCOPLAST CABLES



TELEPHONE CABLE EES TYPE TRANSMISSION CHARACTERISTICS

| | | | | |
|--|--|----------------|----------------|----------------------|
| Max. Conductor Resistance (20°C) | Ohms/Km Ohms/Km | Average Ind | 92 96 | |
| Max. Resistance Unbalance | % % | Average Ind | 0.75 2.5 | |
| Min. Insulation Resistance (20°C) | MOhm-Km | | 10000 | |
| Mutual Capacitance (1000+/-200Hz) | nF/Km nF/Km | Average Ind | 44+/-2 50 | |
| Max. Capacitance Unbalance (1000+/-200Hz) Pair to Pair (within sub-unit) | pF/500m | Average | 22 | |
| | | Ind | 150 | |
| | Pair to Pair (between adjacent sub-units or units) | pF/500m | Average Ind | 20 50 |
| Pair to earth capacitance unbalance | pF/Km | Average Ind | 500 2500 | |
| Dielectric Strength (Volts DC for 3 Sec. min.) | | Cond-Cond | 2000 | |
| | | Cond-Screen | 5000 | |
| Attenuation (max) | Frequency 1 KHz 1 MHz | dB/Km | 1.45 22.6 | |
| Min. Near End Cross-talk (99% pair combination) | Frequency 1 KHz 12 KHz 80 KHz 1000 KHz | | dB/Km | 85 80 67 48 |
| Min. NEXT & ELEFEXT Ind. Power Sums | Frequency 1 KHz 12 KHz 80 KHz 1000 KHz | dB/Km | NEXT | ELEFEXT |
| | | | 70 | 74 |
| | | | 67 | 71 |
| | | | 55 | 58 |
| | | | 37 | 36 |

SELCOPLAST CABLES



TELEPHONE CABLE (DUCT), FOAM/SKIN, FILLED CEF

CEF 200 PR X 0.5 mm DUCT



Specification : STC MAT 1101 Type : CEF

Application : Used for primary and secondary underground (Duct) distribution networks.

Construction

- **Conductor** : Solid annealed plain copper to ASTM B3.
- **Insulation** : Dual insulation of foam-skin polyethylene to ASTM D1248. Type 3, Category 4 or 5, grade E8 or E9.
- **Conductor Identification** : Insulated conductors shall be fully colour coded in accordance with MAT 1101.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 30 to 200mm to minimize crosstalk. Ten pairs shall be assembled together to form a subunit and each subunit shall have a colored binder. Subunits shall be assembled to form units of 50 or 100 pairs depending on the cable size. Such units shall be assembled as detailed in MAT 1101 to form the cable core, along with required spare pairs.
- **Core Filling** : The water resistant filling compound shall be applied to the air space within the cable core.
- **Core Wrapping** : A non-hygroscopic dielectric tape shall be applied longitudinally or helically with an overlap.
- **Moisture Barrier/Shield** : An Aluminium tape (0.2mm) coated on both sides with a copolymer shall be applied longitudinally over the core wrap with an overlap of 6mm or 10% of the core circumference whichever is greater.
- **Sheath** : The sheath shall be an extruded Black low density polyethylene or medium density polyethylene to ASTM D1248, Type 1 or 2, Class C, Category 4 or 5.
- **Identification** : A plastic tape durably marked with STC, MESC and year of manufacture shall be placed longitudinally under the core wrap.
- **Sheath Marking** : The word "DUCT" shall be durably marked on the sheath at longitudinal intervals of not more than 1 mtr. Sequentially numbered length marking shall be placed on the sheath at an interval of one meter.

SELCOPLAST CABLES



TELEPHONE CABLE (DUCT), FOAM/SKIN, FILLED

CEF

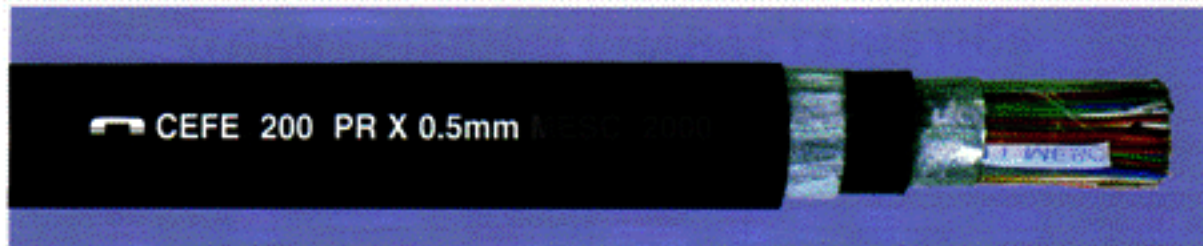
DIMENSIONAL DETAILS

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 0.4 | 20X2X0.4 | 11.7 | 177 | 1000 | 800 |
| | 50X2X0.4 | 15.9 | 337 | 1000 | 1100 |
| | 100X2X0.4 | 20.5 | 611 | 1000 | 1250 |
| | 200X2X0.4 | 27.5 | 1079 | 1000 | 1400 |
| 0.5 | 10X2X0.5 | 10.9 | 154 | 1000 | 800 |
| | 20X2X0.5 | 13.5 | 239 | 1000 | 900 |
| | 50X2X0.5 | 18.6 | 482 | 1000 | 1100 |
| | 100X2X0.5 | 24.9 | 891 | 1000 | 1400 |
| | 200X2X0.5 | 33.1 | 1612 | 1000 | 1600 |
| 0.65 | 20X2X0.65 | 16.3 | 352 | 1000 | 1000 |
| | 50X2X0.65 | 23.1 | 748 | 1000 | 1250 |
| | 100X2X0.65 | 31.3 | 841 | 600 | 1250 |
| | 200X2X0.65 | 42.3 | 1588 | 600 | 1600 |
| 0.9 | 20X2X0.9 | 21.0 | 361 | 600 | 1100 |
| | 50X2X0.9 | 31.0 | 813 | 600 | 1250 |
| | 100X2X0.9 | 41.9 | 1559 | 600 | 1600 |
| | 150X2X0.9 | 50.3 | 2263 | 600 | 1800 |

SELCOPLAST CABLES



TELEPHONE CABLE (DIRECT BURIED) FOAM/SKIN, FILLED CEFE



Specification : STC MAT 1101 Type : CEFE

Application : Used for primary and secondary underground (Direct Buried) distribution networks.

Construction

- **Conductor** : Solid annealed plain copper to ASTM B3.
- **Insulation** : Dual insulation of foam-skin polyethylene to ASTM D1248 Type 3, Category 4 or 5, grade E8 or E9.
- **Conductor Identification** : Insulated conductors shall be fully colour coded in accordance with MAT 1101.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 30 to 200mm to minimize crosstalk. Ten pairs shall be assembled together to form a subunit and each subunit shall have a colored binder. Subunits shall be assembled to form units of 50 or 100 pairs depending on the cable size. Such units shall be assembled as detailed in MAT 1101 to form the cable core, along with required spare pairs.
- **Core Filling** : The water resistant filling compound shall be applied to the air space within the cable core.
- **Core Wrapping** : A non-hygroscopic dielectric tape shall be applied longitudinally or helically with an overlap.
- **Moisture Barrier/Shield** : An Aluminium tape (0.2mm) coated on both sides with a copolymer shall be applied longitudinally over the core wrap with an overlap of 6mm or 10% of the core circumference whichever is greater.
- **First (inner) Sheath** : The sheath shall be an extruded Black low density polyethylene or medium density polyethylene to ASTM D1248, Type 1 or 2, Class C, Category 4 or 5, grade J3.
- **Inter Sheath Water Blocking Material** : A swellable material shall be applied between the inner and outer sheath which shall prevent water ingress between the sheaths.
- **Second (Outer) Sheath** : The sheath shall be an extruded black low density polyethylene to ASTM D1248, Type 1 or 2, class Category 4 or 5, Grade J3.
- **Identification** : A plastic tape durably marked with STC, MESC and year of manufacture shall be placed longitudinally under the core wrap.
- **Sheath Marking** : The telephone handset symbol shall be durably marked on the sheath at longitudinal intervals of not more than 1 mtr. Sequentially numbered length marking shall be placed on the sheath at an interval of one meter.

SELCOPLAST CABLES



TELEPHONE CABLE (DIRECT BURIED) FOAM/SKIN, FILLED CEFE

DIMENSIONAL DETAILS

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 0.4 | 20X2X0.4 | 15.6 | 280 | 1000 | 1000 |
| | 50X2X0.4 | 19.8 | 472 | 1000 | 1100 |
| | 100X2X0.4 | 24.4 | 775 | 1000 | 1400 |
| | 200X2X0.4 | 31.5 | 1340 | 1000 | 1600 |
| 0.5 | 10X2X0.5 | 14.8 | 251 | 1000 | 1000 |
| | 20X2X0.5 | 17.4 | 366 | 1000 | 1100 |
| | 50X2X0.5 | 22.5 | 639 | 1000 | 1250 |
| | 100X2X0.5 | 28.8 | 1064 | 1000 | 1400 |
| | 200X2X0.5 | 37.0 | 1913 | 1000 | 1800 |
| 0.65 | 20X2X0.65 | 20.2 | 490 | 1000 | 1100 |
| | 50X2X0.65 | 27.0 | 929 | 1000 | 1400 |
| | 100X2X0.65 | 35.2 | 1059 | 600 | 1600 |
| | 200X2X0.65 | 46.2 | 1759 | 600 | 1600 |
| 0.9 | 20X2X0.9 | 24.9 | 470 | 600 | 1100 |
| | 50X2X0.9 | 34.9 | 961 | 600 | 1400 |
| | 100X2X0.9 | 45.8 | 1729 | 600 | 1600 |
| | 150X2X0.9 | 54.2 | 2465 | 600 | 1800 |

SELCOPLAST CABLES



TELEPHONE CABLE (DUCT) & (DIRECT BURIED), FOAM/SKIN, FILLED CEF & CEFE

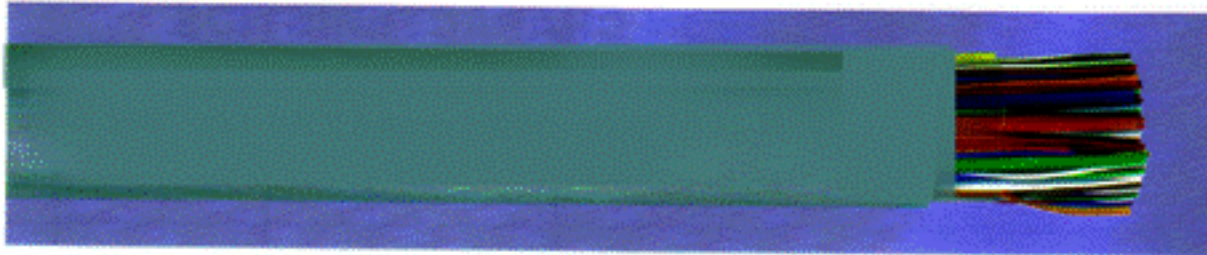
TRANSMISSION CHARACTERISTICS

| Conductor Size | mm | | 0.4 | 0.5 | 0.65 | 0.9 |
|--|--------------------|------------------------|--------|------|---------|-------|
| Max. Conductor Resistance (20°C) | Ohms/Km Ohms/Km | Average Ind | 144 | 92 | 54 | 28 |
| | | | 150 | 96 | 57 | 30 |
| Max. Resistance Unbalance | % | Average Ind | 1.0 | 0.75 | 0.75 | 0.75 |
| | | | 2.5 | 2.5 | 2.0 | 2.0 |
| Min. Insulation Resistance (20°C) | MOhm-Km | | 2500 | | | |
| Mutual Capacitance (1000+/-200Hz) | nF/Km nF/Km | Average Ind | 44+/-2 | | | |
| | | | 50 | | | |
| Max. Capacitance Unbalance (1000+/-200Hz) Pair to pair (within sub-unit) | pF/500m | Average Ind | 25 | | | |
| | | | 150 | | | |
| | | | 17 | | | |
| Pair to Pair (between adjacent sub-units or units) | pF/500m | Average Ind | 55 | | | |
| Pair to Earth | pF/Km | Average Ind | 500 | | | |
| | | | 2500 | | | |
| Dielectric Strength (Volts DC for 3 Sec. mini.) | | Cond-Cond Cond-Shld | 2400 | 2400 | 3000 | 3600 |
| | | | 5000 | 5000 | 10000 | 10000 |
| Attenuation (max.) | Frequency | dB/Km | 1 KHz | 1.45 | 1.1 | 0.8 |
| | | | 1 MHz | 25.7 | 21 | 16.3 |
| Min. Near end Cross-talk (99% pair combination) | Frequency | dB/Km | 85 | | | |
| | | | 80 | | | |
| | | | 67 | | | |
| | | | 48 | | | |
| Min. NEXT & ELEFEXT Ind. Power Sums | Frequency | dB/Km | NEXT | | ELEFEXT | |
| | | | 70 | | 74 | |
| | | | 67 | | 71 | |
| | | | 55 | | 58 | |
| | | | 37 | | 36 | |

SELCOPLAST CABLES



INDOOR CABLE VRB



Specification : STC MAT 1401 Type : VRB

Application : Used for indoors installation in the telecommunication network.

Construction

- **Conductor** : Solid annealed plain copper to ASTM B3.
- **Insulation** : Solid layer of PVC to BS : 6746, TYPE T11
- **Conductor Identification** : Insulated conductors shall be fully colour coded in accordance with MAT 1401.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with a lay of 30 to 200mm. Ten pairs shall be assembled together to form a subunit and each subunit shall have a coloured binder. Upto 100 pair cables, subunits shall be assembled to form the cable core. For cables more than 100 pairs, subunits shall be assembled as 50 pair unit and such units shall form the cable core.
- **Core Wrapping** : A non-hygroscopic dielectric tape shall be applied longitudinally or helically with an overlap of 5 mm min..
- **Sheath** : The sheath shall be an extruded GREY colour HOLOGEN FREE FLAME RETARDANT material. A rip cord of non-metallic, non-hygroscopic material shall be laid under the sheath, parallel to the cable core.
- **Identification** : A plastic tape durably marked with STC, MESC and year of manufacture shall be placed longitudinally under the core wrap.
- **Sheath Marking** : Sequentially numbered length marking shall be placed on the sheath at an interval of one meter.

SELCOPLAST CABLES



INDOOR CABLE VRB

TRANSMISSION CHARACTERISTICS

| | | | |
|---|--------------------|--------------------------|--------------|
| Conductor Resistance (20°C) | Ohms/Km Ohms/Km | Max. Average Max. Ind | 92 96 |
| Resistance Unbalance | % % | Max. Average Max. Ind | 0.75 2.5 |
| Insulation Resistance | MOhm-Km | Min. | 500 |
| Mutual Capacitance (1000+/-200Hz) | nF/Km nF/Km | Average Max. Ind | 75+/-2 90 |
| Capacitance Unbalance (1000+/-200Hz) Pair to Pair (within sub-unit) | pF/500m | Max. Average Max. Ind | 22 150 |
| | pF/500m | Max. Average Max. Ind | 20 50 |
| Dielectric Strength (for minimum 60 Sec.) | Volts dC | Cond-Cond | 1500 |

DIMENSIONAL DETAILS

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Gross Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|--------------|-------------------|----------------------|-------------------------------|-----------------------|--------------------------|
| 0.5 | 10X2X0.5 | 8.2 | 86 | 1000 | 710 |
| | 20X2X0.5 | 10.9 | 157 | 1000 | 800 |
| | 30X2X0.5 | 12.9 | 221 | 1000 | 900 |
| | 50X2X0.5 | 16.4 | 361 | 1000 | 1100 |
| | 100X2X0.5 | 20.0 | 678 | 1000 | 1250 |
| | 150X2X0.5 | 26.9 | 992 | 500 | 1100 |
| | 200X2X0.5 | 33.0 | 1305 | 500 | 1250 |

SELCOPLAST CABLES

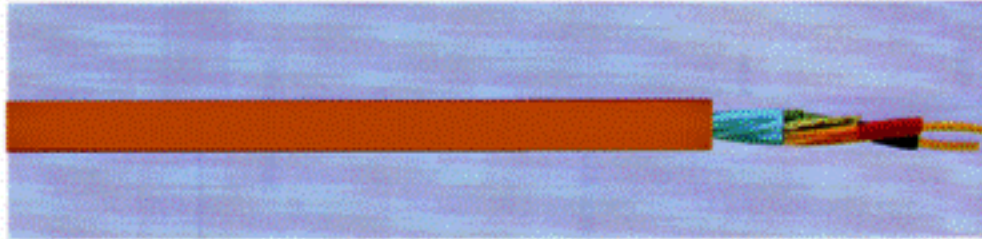


SYSTEM CABLES

SELCOPLAST CABLES



FIRE ALARM SYSTEM FIRE ALARM CABLES (SHIELDED & UNSHIELDED) 105°C (UL 1424) POWER LIMITED FIRE PROTECTIVE SIGNALLING CIRCUIT CABLES 300 V



Application: Can be used as a fixed wiring within buildings in accordance with NEC Article 760 Power limited circuits. Also suitable as a power limited circuit cable in accordance with NEC Article 725 class 2 or 3 circuits.

Construction

- **Conductor** : Solid Annealed Copper Conductor as per ASTM B3.
- **Insulation** : Extruded Solid PVC rated 105°C.
- **Assembly** : Colour coded insulated cores cabled. When the assembly is shielded an Aluminium Mylar Tape is used with a stranded tinned copper drain wire in contact with Aluminium part of the screen.
- **Jacket** : Red Coloured PVC jacketed passes the IEEE-383 Flame Test.

COLOUR CODE

| No. of Conductors | Colour | No. of Conductors | Colour |
|-------------------|--------|-------------------|--------|
| 1 | Black | 4 | Blue |
| 2 | Red | 5 | Brown |
| 3 | Yellow | 6 | Orange |

UNSHIELDED CABLES

| Size AWG | CORES NO. | Strands X diameter No. X mm | Insulation thickness mm | Sheath thickness mm | Approx. O. D. mm | Approx. Weight Kg / Km |
|-------------|--------------|-----------------------------------|-------------------------------|---------------------------|------------------------|------------------------------|
| 18 | 2 | 1 x 1.02 | 0.38 | 0.89 | 5.7 | 42 |
| 16 | 2 | 1 x 1.29 | 0.38 | 0.89 | 6.2 | 55 |
| 14 | 2 | 1 x 1.63 | 0.51 | 1.01 | 7.7 | 84 |
| 12 | 2 | 1 x 2.05 | 0.51 | 1.01 | 8.6 | 113 |

SHIELDED CABLES

| Size AWG | CORES NO. | Strands X diameter No. X mm | Insulation thickness mm | Sheath thickness mm | Approx. O. D. mm | Approx. Weight Kg / Km |
|-------------|--------------|-----------------------------------|-------------------------------|---------------------------|------------------------|------------------------------|
| 18 | 2 | 1 x 1.02 | 0.38 | 0.89 | 6.1 | 53 |
| 16 | 2 | 1 x 1.29 | 0.38 | 0.89 | 6.6 | 66 |
| 14 | 2 | 1 x 1.63 | 0.51 | 1.01 | 8.1 | 106 |
| 12 | 2 | 1 x 2.05 | 0.51 | 1.01 | 9.0 | 136 |
| 18 | 4 | 1 x 1.02 | 0.38 | 0.89 | 6.8 | 78 |
| 16 | 4 | 1 x 1.29 | 0.38 | 0.89 | 7.7 | 107 |
| 14 | 4 | 1 x 1.63 | 0.51 | 1.01 | 9.3 | 163 |
| 12 | 4 | 1 x 2.05 | 0.51 | 1.01 | 10.8 | 233 |

Packing : 6 – 1000 ft Reel.
C – 1000 mtr Reel.
8 – 1000 mtr Reel.

SELCOPLAST CABLES



SECURITY SYSTEM

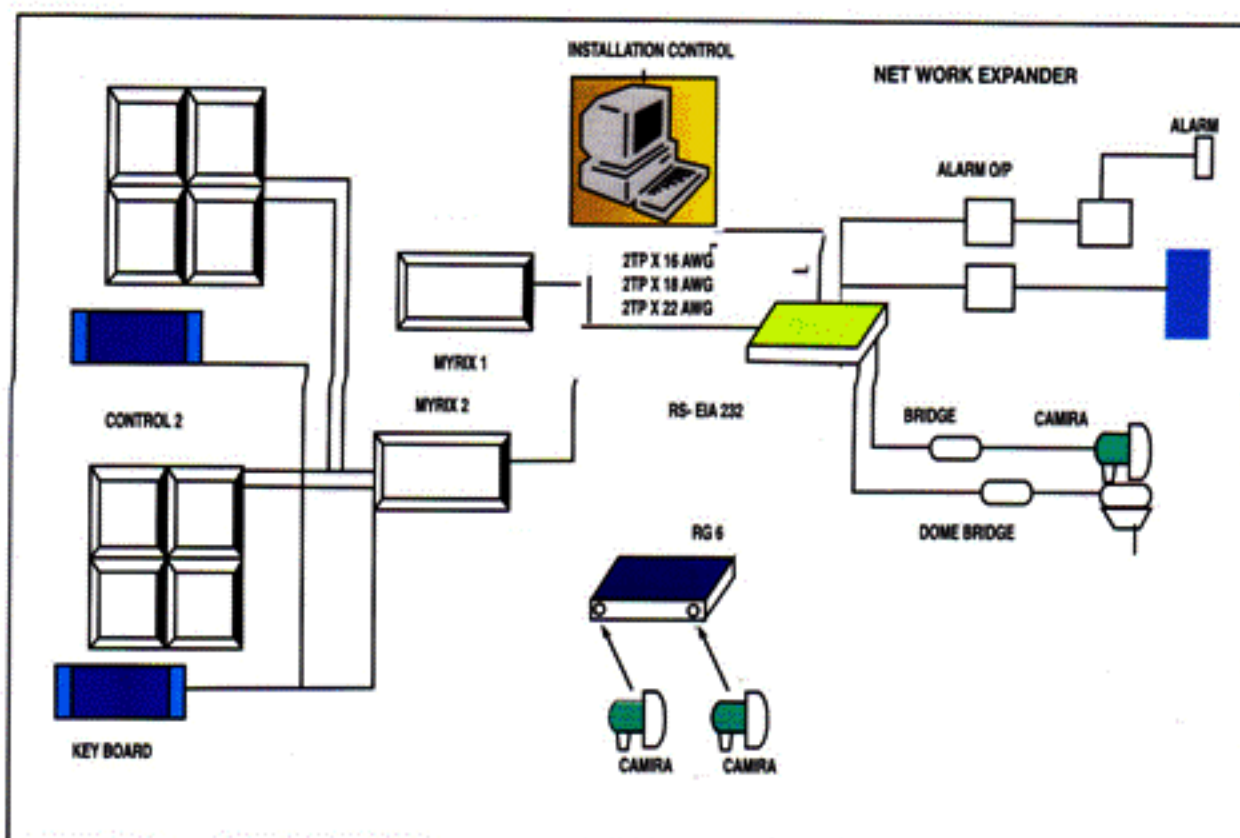
Access control & CCTV

This system covers two main activities like Access Control & Closed Circuit Television (CCTV). The Video Surveillance System operates on closed loop basis.

Surveillance System are used in many different applications where reliable Video Surveillance is required such as traffic monitoring centers, large commercial buildings, retail shops, city centers, banks & supermarkets.

(CCTV) Surveillance Systems can observe several patients at once in a hospital recovery room. CCTV permits an individual to watch many areas from one central location.

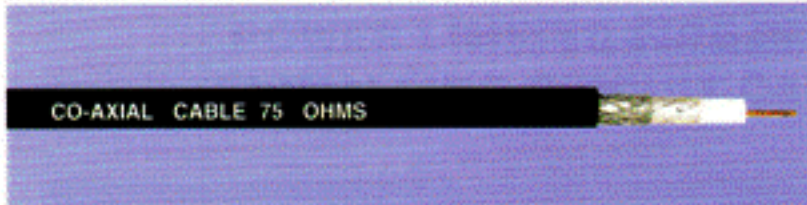
MESC provides the most widely used paired and coaxial cables used for such systems.



SELCOPLAST CABLES



SECURITY SYSTEM ANALOG VIDEO CABLES



| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

RG-59/ U NEC TYPE CM

| Approx. Weight | Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|----------------|-----------|-----|--------------------|-------------------------|------------|------|--|--------------|------|-----------|-----------|-------------------|--|--|
| | Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| Kg. | | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| 10.4 34 | CUWLD | 20 | 1 X 0.81 | 147.2 | FPE | 3.71 | 100% AMT and 40% Al wire braid 55.8 Ω / Km | PVC BLACK | 6.16 | 75 | 53.1 | 82 | 1 10 50 100 200 400 700 900 1000 | 2.0 3.3 5.9 8.2 11.5 16.1 21.3 24.3 25.9 |

RG-6 / U NEC TYPE CM

| Approx. Weight | Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|----------------|-----------|-----|--------------------|-------------------------|------------|------|--|--------------|-----|-----------|-----------|-------------------|--|---|
| | Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| Kg. | | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| 17.2 56.4 | BC | 18 | 1 X 1.02 | 21.4 | FPE | 4.57 | 100% AMT and 61% Tinned copper braid 16.4 Ω / Km | PVC BLACK | 7.0 | 75 | 53.1 | 82 | 1 10 50 100 200 400 700 900 1000 | 1.0 2.3 4.9 6.8 9.2 13.1 17.4 20.0 21.3 |

RG-11 / U

| Approx. Weight | Conductor | | | | Insulation | | Shield | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|----------------|-----------|-----|--------------------|-------------------------|------------|------|---|--------------|-------|-----------|-----------|-------------------|--|--|
| | Material | AWG | Strands X diameter | Nom. D.C. Res. at 20° C | Matl | Dia. | Material & coverage Nom. shield resistance | Matl | Dia | | | | MHz | db / 100m |
| Kg. | | | No. x mm | ohm/Km | | mm | | | mm | ohm | pF/m | % | | |
| 33.2 109 | BC | 14 | 1 X 1.63 | 8.5 | FPE | 7.24 | 100% AMT and 61% Tinned copper braid 9.8 Ω / Km | PVC BLACK | 10-29 | 75 | 52.8 | 84 | 1 10 50 100 200 400 700 900 1000 | 0.6 1.6 3.0 4.3 5.3 7.6 10.8 13.1 14.1 |

SELCOPLAST CABLES



SECURITY SYSTEM CATV CABLES



| LEGEND: | |
|---------|-------------------------------------|
| BC | ⇒ Bare Copper |
| TC | ⇒ Tinned Copper |
| CUWLD | ⇒ Copper Covered Steel (copperweld) |
| PE | ⇒ Solid Polyethylene |
| FPE | ⇒ Cellular (Foam) Polyethylene |
| AL | ⇒ Aluminum |
| AMT | ⇒ Aluminum Mylar Tape |
| PVC | ⇒ Polyvinyl Chloride |

RG-59/U NEC TYPE CM

| Approx Weight | Conductor | | | | Insulation | | Shield | | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|---------------|-----------|-----|--------------------------------|-----------------------------------|------------|-----------------|--|--------------|------------|-----|-----------|-----------|-------------------|---------------------|--|
| | Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | MHz | | | | db/ 100m | |
| 11 38 | BC | 20 | 1 X 0.81 | 34 | FPE | 3.71 | Bare Copper Braid 95% Coverage braid 8.5 Ω / Km | PVC BLACK | 6.16 | 75 | 66.8 | 78 | 1 | 2.0 | |
| | | | | | | | | | | | | | 10 | 3.3 | |
| | | | | | | | | | | | | | 50 | 6.2 | |
| | | | | | | | | | | | | | 100 | 8.9 | |
| | | | | | | | | | | | | | 200 | 12.8 | |
| | | | | | | | | | | | | | 400 | 18.4 | |
| | | | | | | | | | | | | | 500 | 20.7 | |
| | | | | | | | | | | | | | 1000 | 29.8 | |

RG6/U NEC TYPE CM

| Approx Weight | Conductor | | | | Insulation | | Shield | | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|---------------|-----------|-----|--------------------------------|-----------------------------------|------------|-----------------|---|--------------|------------|-----|-----------|-----------|-------------------|---------------------|--|
| | Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | MHz | | | | db/ 100m | |
| 22.2 72.8 | BC | 18 | 1 X 1.02 | 24.0 | FPE | 4.57 | 2 Bare copper Braid 98% Coverage 6.6 Ω / Km | PVC BLACK | 7.35 | 75 | 53.1 | 78 | 1 | 0.7 | |
| | | | | | | | | | | | | | 10 | 2.3 | |
| | | | | | | | | | | | | | 50 | 5.6 | |
| | | | | | | | | | | | | | 100 | 8.2 | |
| | | | | | | | | | | | | | 200 | 11.8 | |
| | | | | | | | | | | | | | 400 | 17.4 | |
| | | | | | | | | | | | | | 700 | 23.6 | |
| | | | | | | | | | | | | | 900 | 27.2 | |
| | | | | | | | | | | | | | 1000 | 28.9 | |

RG11/U NEC TYPE CM

| Approx Weight | Conductor | | | | Insulation | | Shield | | Jacket | | Nom. Imp. | Nom. Cap. | Nom. vel of prop. | Nominal Attenuation | |
|---------------|-----------|-----|--------------------------------|-----------------------------------|------------|-----------------|---|-----------------------|------------|-----|-----------|-----------|-------------------|---------------------|--|
| | Material | AWG | Strands X diameter No. x mm | Nom. D.C. Res. at 20° C ohm/Km | Matl | Core Dia. mm | Material & coverage Nom. shield resistance | Matl | Dia. mm | MHz | | | | db/ 100m | |
| 37.8 124 | BC | 14 | 1 X 1.63 | 8.5 | FPE | 7.24 | Bare copper Braid 97% Coverage 3.6 Ω / Km | Polyethylene BLACK | 10.29 | 75 | 52.8 | 84 | 1 | 0.8 | |
| | | | | | | | | | | | | | 10 | 1.1 | |
| | | | | | | | | | | | | | 50 | 3.0 | |
| | | | | | | | | | | | | | 100 | 4.3 | |
| | | | | | | | | | | | | | 200 | 6.2 | |
| | | | | | | | | | | | | | 400 | 9.5 | |
| | | | | | | | | | | | | | 700 | 13.5 | |
| | | | | | | | | | | | | | 900 | 15.7 | |
| | | | | | | | | | | | | | 1000 | 17.1 | |

SELCOPLAST CABLES



SECURITY SYSTEM EIA RS-485 APPLICATIONS

**22 AWG
(7 X 30)**

Description : Stranded tinned copper, foam polyethylene insulated, twisted pairs overall aluminum polyester shield, 22 AWG stranded tinned copper drain wire, overall tinned copper braid shield (90% coverage). Black PVC jacket.

COLOR CODE

| Pair No. | Color |
|----------|---|
| 1 | White/Blue stripe and Blue/White stripe |
| 2 | White/Orange stripe and Orange/White stripe |
| 3 | White/Green stripe and Green/White stripe |
| 4 | White/Brown stripe and Brown/White stripe |

| UL NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight kg | Nominal D.C.R | | Nominal O.D. | | Nom. Imp. Ohms | Volt. of prop. % | Nominal Capacitance | | | |
|------------------------------|--------------------|-------------------|------|-------------------------|---------------|--------------|-----------------|------|----------------------|---------------------------|---------------------|-------|------|-------|
| | | m | ft | | Cond. | Shield | mm | Inch | | | c/c | | c/s | |
| | | | | | Ω /km | Ω /km | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC Type CM | 1 | 304.2 | 1000 | 22.0 | 48.2 | 9.5 | 7.2 | 0.28 | 120 | 78 | 36.1 | 11 | 65.6 | 20 |
| Type PLTC 300V | 2 | 304.2 | 1000 | 32.4 | 48.2 | 4.6 | 9.6 | 0.38 | 120 | 78 | 36.1 | 11 | 65.6 | 20 |
| | 3 | 304.2 | 1000 | 39.7 | 48.2 | 4.6 | 10.6 | 0.42 | 120 | 78 | 36.1 | 11 | 65.6 | 20 |
| | 4 | 304.2 | 1000 | 48.8 | 48.2 | 3.6 | 11.7 | 0.46 | 120 | 78 | 36.1 | 11 | 65.6 | 20 |

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

SELCOPLAST CABLES



SECURITY SYSTEM LOW CAPACITANCE COMPUTER CABLES EIA RS-485 APPLICATIONS

24 AWG (7 X 32) Description : Tinned copper conductor, polyethylene insulated, twisted pairs, overall Aluminum polyester shield, with 24 AWG stranded tinned copper drain wire, overall tinned copper braid shield (90% coverage), Grey PVC jacket.

| UL NEC Type Voltage grade temperature rating | No. of pairs | Packing length | | Approx. weight | Approx. O.D. | | Nominal D.C.R | | Nom. Imp. | Nom. Volt. of prop. | Nominal Capacitance | | | |
|---|--------------------|-------------------|------|-------------------|-----------------|------|---------------|--------|--------------|------------------------------|---------------------|------|-------|------|
| | | m | ft | | kgs | mm | Inch | Cond. | | | Shield | c/c | | c/s |
| | | | | | | | | Ohm/km | Ohm/km | Ohms | | pF/m | pF/ft | pF/m |
| NEC CM 300V, 80°C | 1 | 1000 | 3280 | 63 | 6.8 | 0.26 | 78.7 | 11.0 | 120 | 66 | 42 | 12.8 | 75.5 | 23.0 |
| NEC CM 300V, 80°C | 2 | 1000 | 3280 | 106 | 10.3 | 0.40 | 78.7 | 7.2 | 120 | 66 | 42 | 12.8 | 75.5 | 23.0 |

AUDIO & COMPUTER CABLE

22 AWG (7 X 30) Description : Tinned copper conductor, polyethylene insulated Black & Red under Aluminum polyester shield, Green & White under Aluminum polyester shield, common drain wire of 24 AWG stranded tinned copper with Grey PVC jacket.

| UL NEC Type Voltage grade temperature rating | No. of pairs | Packing length | | Approx. weight | Approx. O.D. | | Nominal D.C.R | | Nom. Imp. | Nom. Volt. of prop. | Nominal Capacitance | | | |
|---|--------------------|-------------------|------|-------------------|-----------------|------|---------------|--------|--------------|------------------------------|---------------------|------|-------|------|
| | | m | ft | | kgs | mm | Inch | Cond. | | | Shield | c/c | | c/s |
| | | | | | | | | Ohm/km | Ohm/km | Ohms | | pF/m | pF/ft | pF/m |
| NEC CM 300V, 60°C | 2 | 1000 | 3280 | 35 | 6.1 | 0.24 | 49.2 | 54.5 | 45 | 66 | 115 | 35 | 203 | 62 |

20 AWG (7 X 28) Description : Tinned copper, polyethylene insulated Twisted pairs. Each pair individually Shielded with Aluminum polyester shield, and 22 AWG stranded tinned copper drain wire. Grey PVC jacket.
Color code : Black / Red, Black / White, Black/Green.

| | | | | | | | | | | | | | | |
|----------------------|---|-------|------|------|------|------|------|------|----|----|----|----|-----|----|
| NEC CM 300V, 80°C | 3 | 304.8 | 1000 | 26.6 | 6.74 | 0.34 | 34.4 | 45.9 | 50 | 66 | 98 | 30 | 180 | 55 |
|----------------------|---|-------|------|------|------|------|------|------|----|----|----|----|-----|----|

18 AWG (19 X 30) Description : Tinned copper, polyethylene insulated twisted pairs. Each pair individually Shielded with Aluminum polyester shield, and 20 AWG stranded tinned copper drain wire with Grey PVC jacket.
Color code : Black / Red, Black / White, Black / Green.

| | | | | | | | | | | | | | | |
|----------------------|---|-------|------|------|-------|------|----|------|----|----|----|----|-----|----|
| NEC CM 300V, 80°C | 3 | 304.8 | 1000 | 38.5 | 10.37 | 0.41 | 21 | 27.2 | 50 | 66 | 98 | 30 | 180 | 55 |
|----------------------|---|-------|------|------|-------|------|----|------|----|----|----|----|-----|----|

C/C – Capacitance between conductors

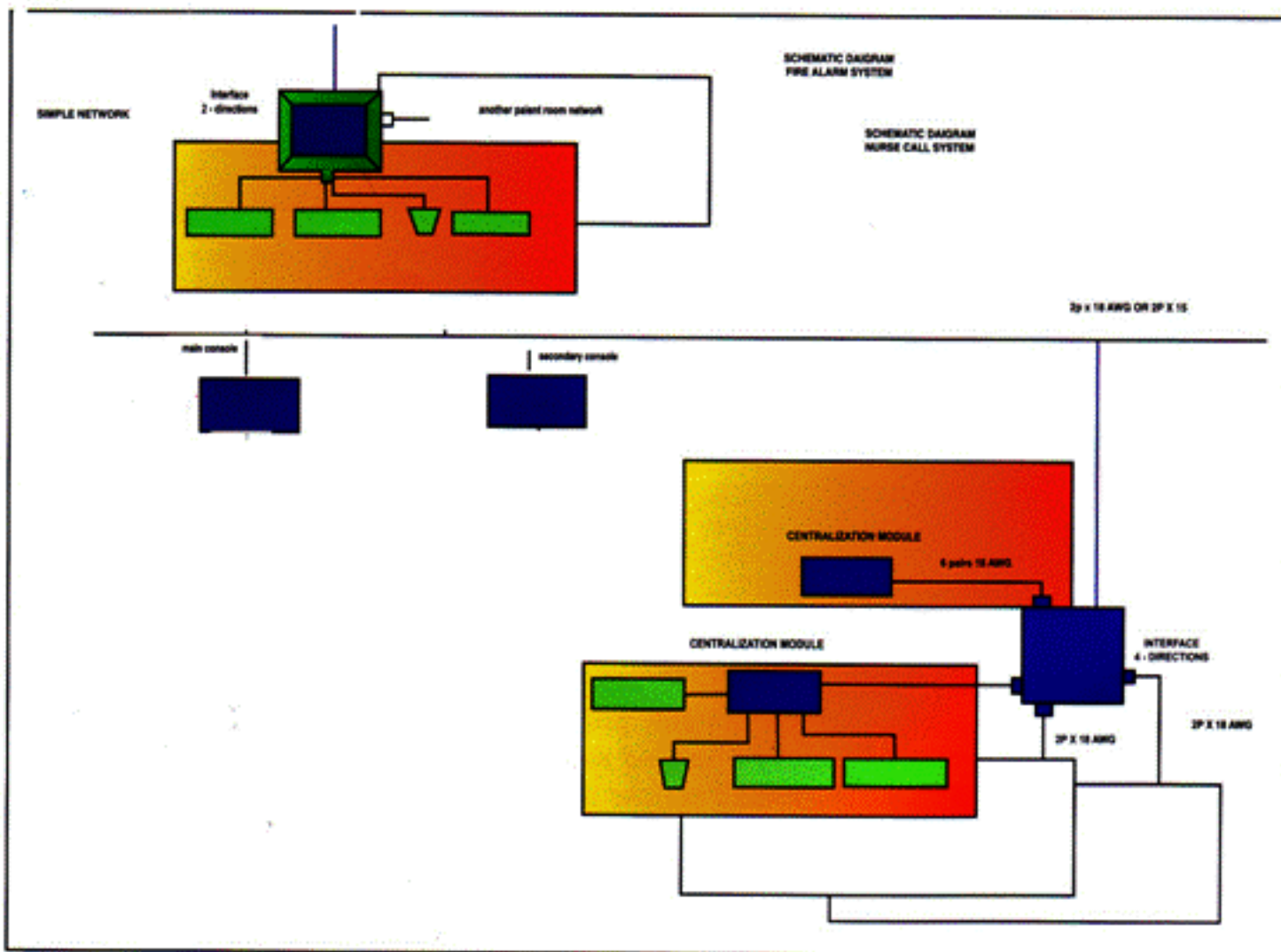
C/S – Capacitance between one conductor and other conductors connected to shield

SELCOPLAST CABLES



NURSE CALL SYSTEM

- Developed to help Hospital staff for easier and faster communication
(System's schématique cabling circuit is enclosed)



SELCOPLAST CABLES



NURSE CALL SYSTEM

JE-Y(St)Y INDUSTRIAL ELECTRONIC CABLE VDE - 0815



Application : Suitable for measurement and control in the fields of electronics. This cable is also used for data transmission in computers. Suitable for fixed installation in dry and humid premises.

Special Applications : Suitable for MAXI-TERMI point connections.

| Construction | | Technical Data | |
|---------------------|---|--------------------------------------|---|
| Conductor | : Solid plain copper. | Temperature range | : |
| Insulation | : PVC insulation type YI-3 to VDE 0207. | Stationary | : - 30°C to +70°C.. |
| Pair | : Cores twisted into pairs. Two(2) pairs shall be a quad. Pairs colour coded as per VDE- 0815. First Pair : Blue + Red. Second Pair : Grey + Yellow. Third Pair : Green + Brown. Fourth Pair : White + Black. | Flexing | : - 5°C to +50°C. |
| Units | : Four pairs bundled into a unit and wrapped with an open helix of numbered polyester tape. | Peak working voltage | : 225 Volts. |
| Assembly | : Units cabled with non-hygroscopic fillers if necessary, shielded with aluminum polyester tape and stranded tinned copper drain wire for electrostatic noise rejection. | Minimum bending radius | : 7.5 X cable diameter. |
| Outer Sheath | : PVC type YM-1 as per VDE 0207 coloured grey (blue for Intrinsically safe circuits). Outer sheath passes flame retardant test as per IEC-332-1. | Conductor resistance at 20°C | : 36.6 ohm/Km. |
| | | Insulation resistance | : 100 MOhm - Km. |
| | | Mutual Capacitance | : 100 nF/Km (cables up to 4 pairs the value can exceed by 20%). |
| | | Capacitance unbalance maximum | : 200pF/100m. |
| | | R.M.S. test voltage | : 500 V core/core. 2000 V core/screen. |
| | | Attenuation | : 1.1dB/Km at 800Hz. 3.0dB/Km at 10 KHz. |

| Size sq. mm | Pairs | Strands X diameter No. X mm | Insulation thickness mm | Sheath thickness mm | Approx. O. D. mm | Approx. Weight Kg / Km |
|----------------|-------|-----------------------------------|-------------------------------|---------------------------|------------------------|------------------------------|
| 0.5 | 1 | 1 X 0.8 | 0.3 | 1.0 | 5.1 | 45 |
| | 2 | 1 X 0.8 | 0.3 | 1.0 | 5.9 | 60 |
| | 4 | 1 X 0.8 | 0.3 | 1.0 | 9.1 | 105 |
| | 8 | 1 X 0.8 | 0.3 | 1.0 | 11.4 | 170 |
| | 12 | 1 X 0.8 | 0.3 | 1.2 | 13.7 | 250 |
| | 16 | 1 X 0.8 | 0.3 | 1.2 | 15.3 | 315 |
| | 20 | 1 X 0.8 | 0.3 | 1.2 | 16.8 | 375 |

Packing: Wooden Drums of 500/1000meters

SELCOPLAST CABLES

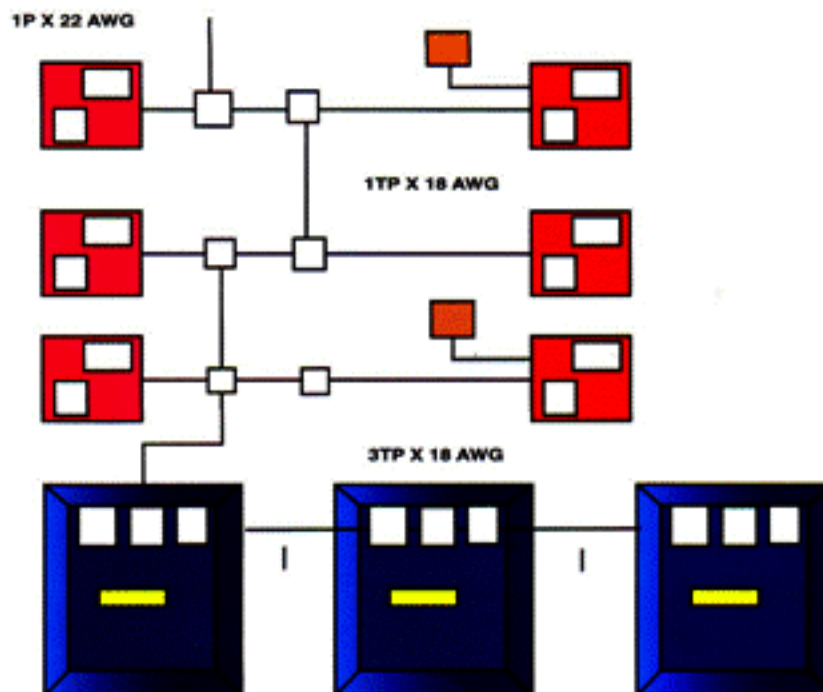


INTERCOM SYSTEM

- Residential - Single - Audio & Video - Multi - Audio & Video
- Business - Multi - Audio & Video
- Industrial - Multi - Audio & Video

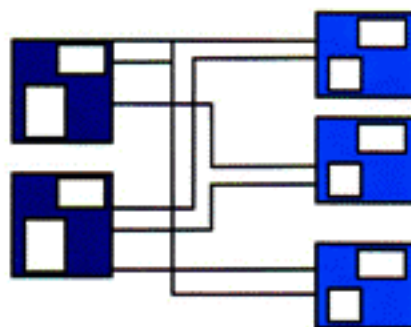
(System's schematic cabling circuit for both types are enclosed)

AUDIO & VIDEO DAIGRAM



SINGLE LINE

SCHEMATIC DIAGRAM
INTERCOM SYSTEM



AUDIO INTERCOM

SELCOPLAST CABLES



INTERCOM SYSTEM AUDIO CABLES

22AWG (7 X 30) Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket. Color code : Red, Black.

| Nec Type Voltage grade | No. of Cond. | Packing length | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | |
|---------------------------|--------------------|-------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|-------|
| | | m | ft | | mm | inch | mm | inch | mm | inch |
| NEC Type CM 300V | 2 | 1000 | 3280 | 23 | 0.38 | 0.015 | 0.64 | 0.025 | 4.5 | 0.177 |

22 AWG (7 X 30) Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket.

COLOR CODE

| Pair No. | Color |
|----------|---------------|
| 1 | Black & Red |
| 2 | Black & White |
| 3 | Black & green |

| Nec Type Voltage grade | No. of Pairs | Packing length | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | |
|---------------------------|--------------------|-------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|------|
| | | m | ft | | mm | inch | mm | inch | mm | inch |
| NEC Type CM 300V | 2 | 1000 | 3280 | 41 | 0.25 | 0.010 | 0.81 | 0.032 | 6.4 | 0.25 |
| NEC Type CM 300V | 3 | 1000 | 3280 | 53 | 0.25 | 0.010 | 0.81 | 0.032 | 6.8 | 0.27 |

18 AWG (16 X 30) Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket.

| | | | | | | | | | | |
|---------------------|---|------|------|----|------|-------|------|-------|-----|------|
| NEC Type CM 300V | 1 | 1000 | 3280 | 40 | 0.36 | 0.014 | 0.81 | 0.032 | 5.6 | 0.22 |
| NEC Type CM 300V | 2 | 1000 | 3280 | 73 | 0.36 | 0.014 | 0.81 | 0.032 | 8.7 | 0.34 |
| NEC Type CM 300V | 3 | 1000 | 3280 | 96 | 0.36 | 0.014 | 0.81 | 0.032 | 9.3 | 0.36 |

SELCOPLAST CABLES



INTERCOM SYSTEM

AUDIO AND INSTRUMENTATION CABLES

**22 AWG
(7 X 30)**

Description : Stranded tinned copper, PVC insulated, twisted pair, aluminum polyester shield, 24 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red.

| NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | mm | inch | mm | Inch | mm | Inch | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC Type CM 300V 80°C | 1 | 304.8 | 1000 | 6.4 | 0.25 | 0.010 | 0.51 | 0.020 | 3.88 | 0.153 | 174 | 53 | 318 | 97 |

**20 AWG
(7 X 30)**

Description : Stranded tinned copper, PVC insulated, twisted pair, aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red.

| NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | mm | inch | mm | Inch | mm | Inch | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC Type CM 300V 80°C | 1 | 304.8 | 1000 | 11.2 | 0.36 | 0.014 | 0.79 | 0.031 | 5.24 | 0.206 | 89 | 27 | 161 | 49 |

**22 AWG
(7 X 30)**

Description : Stranded tinned copper, polyethylene insulated, conductors cabled , aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red, Clear .

| NEC Type Voltage grade | No. of Cond. | Packing length | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | mm | inch | mm | Inch | mm | Inch | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC CM 300V 80°C | 3 | 304.8 | 1000 | 11.2 | 0.41 | 0.016 | 0.84 | 0.033 | 5.30 | 0.209 | 75 | 23 | 134 | 41 |

**20 AWG
(7 X 28)**

Description : Stranded tinned copper, Polyethylene insulated, conductors cabled, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red, Clear .

| | | | | | | | | | | | | | | |
|--------------------------|---|-------|------|------|------|-------|------|-------|------|-------|----|----|-----|----|
| NEC Type CM 300V 80°C | 3 | 304.8 | 1000 | 13.8 | 0.41 | 0.016 | 0.84 | 0.033 | 5.66 | 0.223 | 89 | 27 | 167 | 51 |
|--------------------------|---|-------|------|------|------|-------|------|-------|------|-------|----|----|-----|----|

**16 AWG
(19 X 29)**

Description : Stranded tinned copper, Polyethylene insulated, conductors cabled, aluminum polyester shield, 18 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red, Clear .

| | | | | | | | | | | | | | | |
|--------------------------|---|-------|------|------|------|-------|------|-------|------|-------|----|----|-----|----|
| NEC Type CM 300V 80°C | 3 | 304.8 | 1000 | 27.4 | 0.73 | 0.029 | 0.79 | 0.031 | 8.27 | 0.326 | 85 | 26 | 164 | 50 |
|--------------------------|---|-------|------|------|------|-------|------|-------|------|-------|----|----|-----|----|

SELCOPLAST CABLES

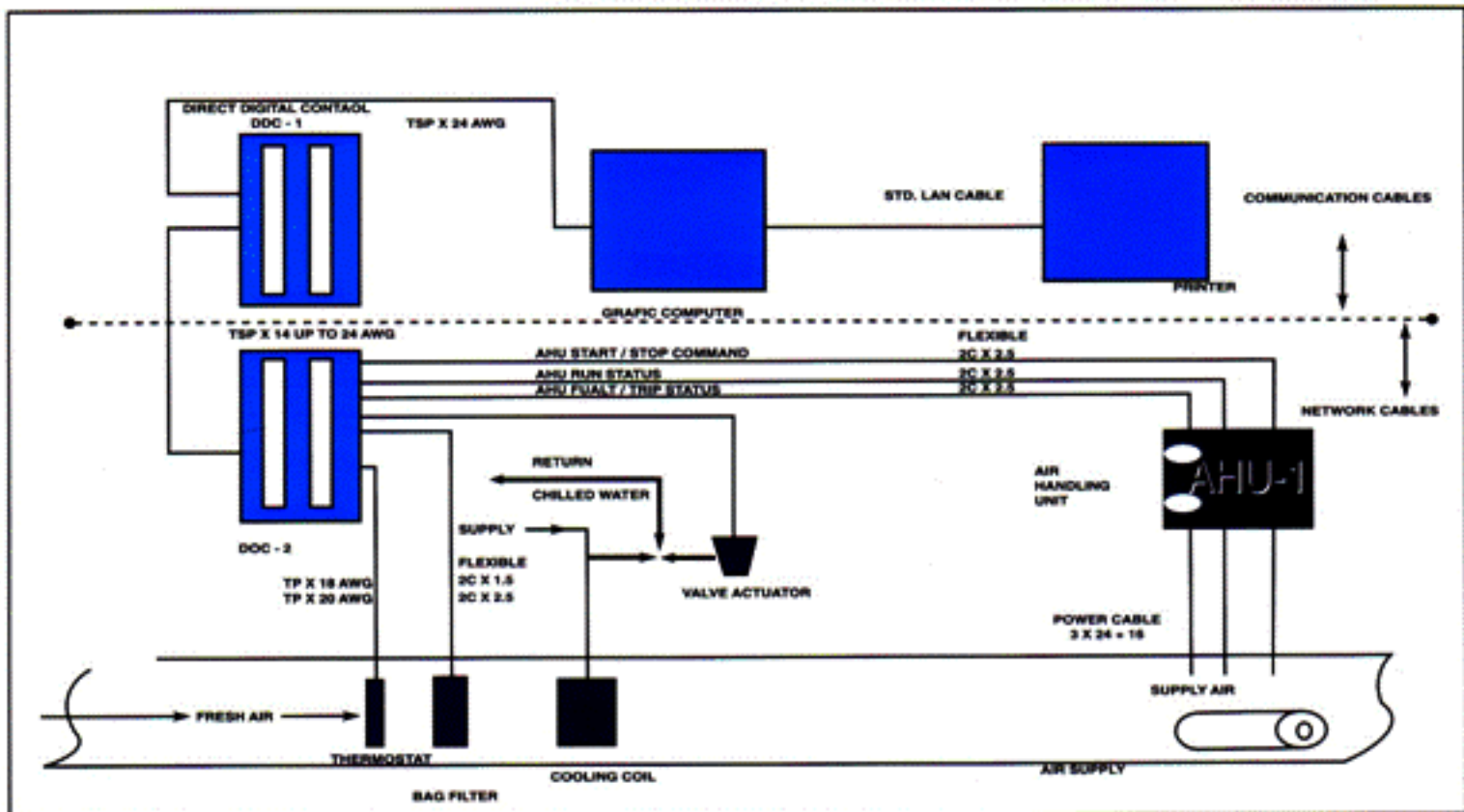


BUILDING MANAGEMENT SYSTEM

What is a (BMS) Building Management System ?

Building Management Systems consist of intelligent controllers which are networked together to provide comprehensive control for heating, Ventilation and Air Conditioning (HVAC) and other building services. Information is taken from sensors or other input devices which is processed through the intelligent controllers. These then issue appropriate commands to devices such as valves and actuators. The system is viewed through a "supervisor" which is usually a PC running building management software. This software allows you to change control parameters as well as perform a wide range of energy analysis and maintenance functions.

(System's schematic building cabling circuit is shown below)



CABLING DIAGRAM

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM INSTRUMENTATION / PROCESS CONTROL CABLES (TYPE PLTC 300 VOLTS) PVC INSULATED SINGLE PAIR / TRIAD UNSHIELDED

Temperature range - 40°C to +90°C
Specifications : UL13



Application : Can be used in cable tray, conduit or direct burial application for instrumentation / process control, in dry or wet location.

- **Conductor** : Plain copper to ASTM B3, stranded to Class B / Class C of ASTM B8.
- **Insulation** : Flame retardant PVC rated 90°C as per UL13.
- **Pair Colour Code** : White and Black.
- **Triple Colour Code** : White, Black and Red.
- **Assembly** : Twisted pair / triple is covered with a polyester tape if required.
- **Jacket** : Extruded black PVC as per UL13, oil and sunlight resistant passes flame test as per IEEE - 383 (70000 BTU). The jacket is impervious to vapour and moisture penetration.

SINGLE PAIR

| SIZE (AWG) | Pairs | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|------------|-------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 16 | 1 | 7 X 0.488 | 0.38 | 0.89 | 6.8 | 60 |

SINGLE TRIAD

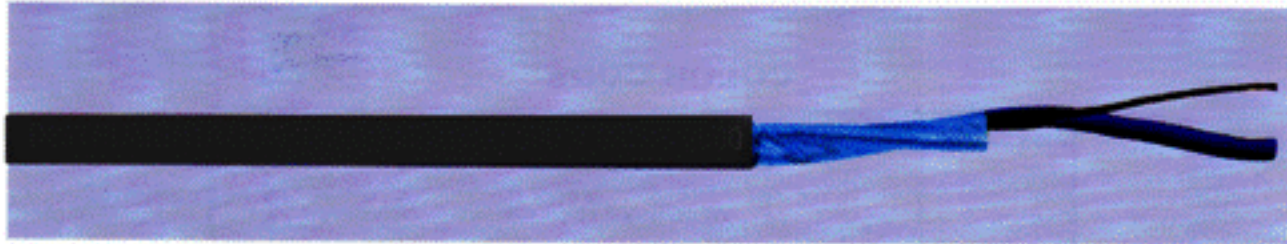
| SIZE (AWG) | Triples | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|------------|---------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 16 | 1 | 7 X 0.488 | 0.38 | 1.01 | 7.4 | 85 |

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM INSTRUMENTATION/PROCESS CONTROL CABLES (TYPE PLTC 300 VOLTS) PVC INSULATED SINGLE PAIR / TRIAD OVERALL SHIELDED

Temperature range - 40°C to +90°C
Specifications : UL13



Application : Can be used in cable tray, conduit or direct burial application for instrumentation / process control, in dry or wet location.

- **Conductor** : Plain copper to ASTM B3 , stranded to class B of ASTM B8.
- **Insulation** : Flame retardant PVC insulation rated 90°C as per UL13.
- **Pair Colour Code** : White and Black.
- **Triple Colour Code** : White, Black and Red.
- **Overall Shielding** : Twisted pair / triple is shielded with aluminum polyester tape and a tinned copper drain wire.
- **Jacket** : Extruded black PVC as per UL13, oil and sunlight resistant, passes flame test as per IEEE - 383 (70000 BTU). The jacket is impervious to vapour and moisture penetration.

SINGLE PAIR

| SIZE (AWG) | Pairs | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|------------|-------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 20 | 1 | 7 X 0.307 | 0.38 | 0.89 | 5.8 | 45 |
| 18 | 1 | 7 X 0.386 | 0.38 | 0.89 | 6.3 | 55 |
| 16 | 1 | 7 X 0.488 | 0.38 | 0.89 | 6.9 | 70 |

SINGLE TRIAD

| SIZE (AWG) | Triples | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|------------|---------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 18 | 1 | 7 X 0.386 | 0.38 | 0.89 | 6.6 | 65 |
| 16 | 1 | 7 X 0.488 | 0.38 | 1.01 | 7.5 | 85 |

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM LOW CAPACITANCE COMPUTER CABLES FOR EIA RS-232 AND EIA RS-422 APPLICATIONS

**24 AWG
(7 X 32)** Description : Stranded tinned copper, polyethylene insulated, twisted pairs. Overall aluminum polyester shield, 24 AWG stranded tinned copper drain wire & overall tinned copper braid shield (65% coverage), Grey PVC jacket.

COLOR CODE

| Pair No. | Color |
|----------|---|
| 1 | White/Blue stripe and Blue/White stripe |
| 2 | White/Orange stripe and Orange/White stripe |
| 3 | White/Green stripe and Green/White stripe |
| 4 | White/Brown stripe and Brown/White stripe |
| 5 | White/Gray stripe and Gray/White stripe |
| 6 | Red/Blue stripe and Blue/Red stripe |

| NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight kg | Nominal D.C.R | | Nominal O.D. | | Nom. Imp. Ohms | Volt. of prop. | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------------|---------------|--------------|-----------------|------|----------------------|----------------------|---------------------|-------|------|-------|
| | | m | ft | | Cond. | Shield | mm | Inch | | | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| Type CM 30V | 2 | 1000 | 3280 | 55 | 78.7 Ω/km | 15.1 Ω/km | 7.0 | 0.28 | 100 | 78 | 41.0 | 12.5 | 72.2 | 22 |
| Type CM 30V | 6 | 1000 | 3280 | 90 | 78.7 Ω/km | 11.6 Ω/km | 8.9 | 0.35 | 100 | 78 | 41.0 | 12.5 | 72.2 | 22 |

LOW CAPACITANCE COMPUTER CABLES FOR EIA RS-485 APPLICATIONS

**24 AWG
(7 X 32)** Description : Stranded tinned copper, polyethylene insulated, twisted pairs, overall aluminum polyester shield, 24 AWG stranded tinned copper drain wire, & overall tinned copper braid shield (90% coverage), Grey PVC jacket.

| NEC Type Voltage grade Temp. rating | No. of pairs | Packing length | | Approx. weight kg | Approx. O.D. | | Nominal D.C.R | | Nom. Imp. Ohms | Nom. Volt. of prop. | Nominal Capacitance | | | |
|---|--------------------|-------------------|------|-------------------------|-----------------|------|-----------------|------------------|----------------------|------------------------------|---------------------|-------|------|-------|
| | | m | ft | | mm | Inch | Cond. Ohm/km | Shield Ohm/km | | | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC CM 300V/80°C | 1 | 1000 | 3280 | 63 | 6.8 | 0.26 | 78.7 | 11.0 | 120 | 66 | 42 | 12.8 | 75.5 | 23.0 |
| NEC CM 300V/80°C | 2 | 1000 | 3280 | 106 | 10.3 | 0.40 | 78.7 | 7.2 | 120 | 66 | 42 | 12.8 | 75.5 | 23.0 |

C/C – Capacitance between conductors

C/S – Capacitance between one conductor and other conductors connected to shield

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM (CONNECTION & CONTROL)



Specification: UL Style 1015, CSA AWM

Temperature range, - 40°C to + 90°C, Voltage 600V

Application : These cables are recommended for all indoor electrical installations and wiring of electrical equipment, within buildings.

Conductor : Flexible tinned copper to ASTM B33, stranded to class K of ASTM B174

Insulation : Flame retardant PVC rated 90°C.

Colour Code: Colour Coded insulation up to 5* conductors and Black With number print for more than 5 conductors.

Assembly : Insulated conductors cabled with suitable non hygroscopic fillers if necessary and wrapped with a binder tape.

Outer Jacket: Extruded flame retardant PVC coloured Grey.

16 AWG (26X30 AWG)

| No. of cores | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|--------------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 2 | 26X0.254 | 0.81 | 1.6 | 9.7 | 130 |
| 3 | 26X0.254 | 0.81 | 1.6 | 10.2 | 150 |
| 4 | 26X0.254 | 0.81 | 1.6 | 11.2 | 180 |
| 5 | 26X0.254 | 0.81 | 1.6 | 12.2 | 205 |
| 7 | 26X0.254 | 0.81 | 1.6 | 12.9 | 260 |
| 9 | 26X0.254 | 0.81 | 1.6 | 14.9 | 325 |
| 12 | 26X0.254 | 0.81 | 1.6 | 16.6 | 405 |

14 AWG (41X30 AWG)

| | | | | | |
|----|----------|------|-----|------|-----|
| 2 | 41X0.254 | 0.81 | 1.6 | 10.5 | 160 |
| 3 | 41X0.254 | 0.81 | 1.6 | 11.2 | 190 |
| 4 | 41X0.254 | 0.81 | 1.6 | 12.2 | 225 |
| 5 | 41X0.254 | 0.81 | 1.6 | 13.2 | 265 |
| 7 | 41X0.254 | 0.81 | 1.6 | 14.1 | 335 |
| 9 | 41X0.254 | 0.81 | 1.6 | 16.3 | 420 |
| 12 | 41X0.254 | 0.81 | 1.6 | 18.3 | 530 |

* COLOR CODE : 1- Black 4-Orange
 2- Brown 5- Yellow
 3- Red

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM (CONTROL , MEASUREMENT & DATA TRANSMISSION)



Specification: UL Style 1015, CSA AWM

Temperature range, -40°C to +90°C, Voltage 600V

Application : These cables are recommended for all indoor electrical /electronic systems, Copper wire screen provides interference free signal transmission.

Conductor : Flexible tinned copper to ASTM B33, standed to class K of ASTM B174.

Insulation : Flame retardant PVC rated 90°C.

Colour Code: Colour Coded insulation up to 5* conductors and Black with number print for more than 5 conductors.

Assembly : Insulated conductors assembled in concentric layers, shielded with Aluminum polyester tape with a stranded tinned copper drain wire and braided (90% coverage) with tinned copper wire.

Outer Jacket: Extruded flame retardant PVC coloured Grey.

16 AWG (26X30 AWG)

| No. of cores | Strands X diameter No. X mm | Insulation thickness mm | Nominal jacket thickness mm | Approx. O.D. mm | Approx. weight Kg/Km |
|--------------|-----------------------------|-------------------------|-----------------------------|-----------------|----------------------|
| 2 | 26X0.254 | 0.81 | 1.6 | 10.5 | 160 |
| 3 | 26X0.254 | 0.81 | 1.6 | 11.1 | 175 |
| 4 | 26X0.254 | 0.81 | 1.6 | 11.8 | 205 |
| 5 | 26X0.254 | 0.81 | 1.6 | 12.8 | 245 |
| 7 | 26X0.254 | 0.81 | 1.6 | 13.7 | 295 |
| 9 | 26X0.254 | 0.81 | 1.6 | 15.7 | 360 |
| 12 | 26X0.254 | 0.81 | 1.6 | 17.4 | 445 |

14 AWG (41X30 AWG)

| | | | | | |
|----|----------|------|------|------|-----|
| 2 | 41X0.254 | 0.81 | 1.6 | 11.3 | 190 |
| 3 | 41X0.254 | 0.81 | 1.6 | 11.9 | 210 |
| 4 | 41X0.254 | 0.81 | 1.6 | 12.8 | 250 |
| 5 | 41X0.254 | 0.81 | 1.6 | 13.8 | 300 |
| 7 | 41X0.254 | 0.81 | 1.6 | 14.9 | 365 |
| 9 | 41X0.254 | 0.81 | 1.6 | 17.1 | 455 |
| 12 | 41X0.254 | 0.81 | 2.11 | 20.2 | 610 |

* COLOR CODE : 1- Black 4-Orange
 2- Brown 5- Yellow
 3- Red

SELCOPLAST CABLES



BUILDING MANAGEMENT SYSTEM AUDIO AND INSTRUMENTATION CABLES

18 AWG (19 X 30) Description : Stranded tinned copper, S-R PVC insulated, conductors cabled. Aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red, White, Green.

| NEC Type Voltage grade | No. of cores | Packing length | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | kg | mm | inch | mm | Inch | mm | Inch | c/c | | c/s |
| | | | | pF/m | | | | | | | | pF/ft | pF/m | pF/ft |
| Type CM 300V | 4 | 1000 | 3280 | 80 | 0.25 | 0.010 | 0.89 | 0.035 | 6.3 | 0.248 | 230 | 70 | 394 | 120 |

18 AWG (16 X 30) Description : Stranded tinned copper, PVC insulated, twisted pairs, Grey PVC jacket. Color code : Red, Black.

| NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | |
|---------------------------|--------------------|-------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|
| | | m | ft | | kg | mm | inch | mm | inch | mm |
| Type CM 300V | 1 | 1000 | 3280 | 39 | 0.36 | 0.014 | 0.81 | 0.032 | 5.4 | 0.212 |

14 AWG (19 X 27) Description : Stranded tinned copper, polyethylene insulated, twisted pairs, aluminum polyester shield, 16 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, clear

| NEC Type Voltage grade | No. of pairs | Packing length | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | kg | mm | inch | mm | Inch | mm | Inch | c/c | | c/s |
| | | | | pF/m | | | | | | | | pF/ft | pF/m | pF/ft |
| Type CL2 600V | 1 | 1000 | 3280 | 102 | 0.81 | 0.032 | 0.89 | 0.035 | 9.1 | 0.358 | 79 | 24 | 154 | 47 |

18 AWG (16 X 30) Description : Stranded tinned copper, polyethylene insulated, twisted pairs, aluminum polyester shield. 20 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, clear

| | | | | | | | | | | | | | | |
|--------------|---|------|------|----|------|-------|------|-------|-----|-------|----|----|-----|----|
| Type CM 300V | 1 | 1000 | 3280 | 40 | 0.46 | 0.018 | 0.71 | 0.028 | 5.8 | 0.228 | 79 | 24 | 144 | 44 |
|--------------|---|------|------|----|------|-------|------|-------|-----|-------|----|----|-----|----|

18 AWG (16 X 30) Description : Stranded tinned copper, polyethylene insulated, conductors cabled, Aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, Red, clear.

| NEC Type Voltage grade | No. of cores | Packing length | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|-------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | kg | mm | inch | mm | Inch | mm | Inch | c/c | | c/s |
| | | | | pF/m | | | | | | | | pF/ft | pF/m | pF/ft |
| NECType CM 300V | 3 | 1000 | 3280 | 58 | 0.46 | 0.018 | 0.84 | 0.033 | 6.4 | 0.252 | 79 | 24 | 157 | 48 |

C/C – Capacitance between conductors.

C/S – Capacitance between conductors and other conductors connected to shield.

SELCOPLAST CABLES



PUBLIC ADDRESS SYSTEM SOUND (Speaker + Microphone) CLOCK & PAGING

- **Common applications are as follows :**
 - Residential
 - Business
 - Amusement centers

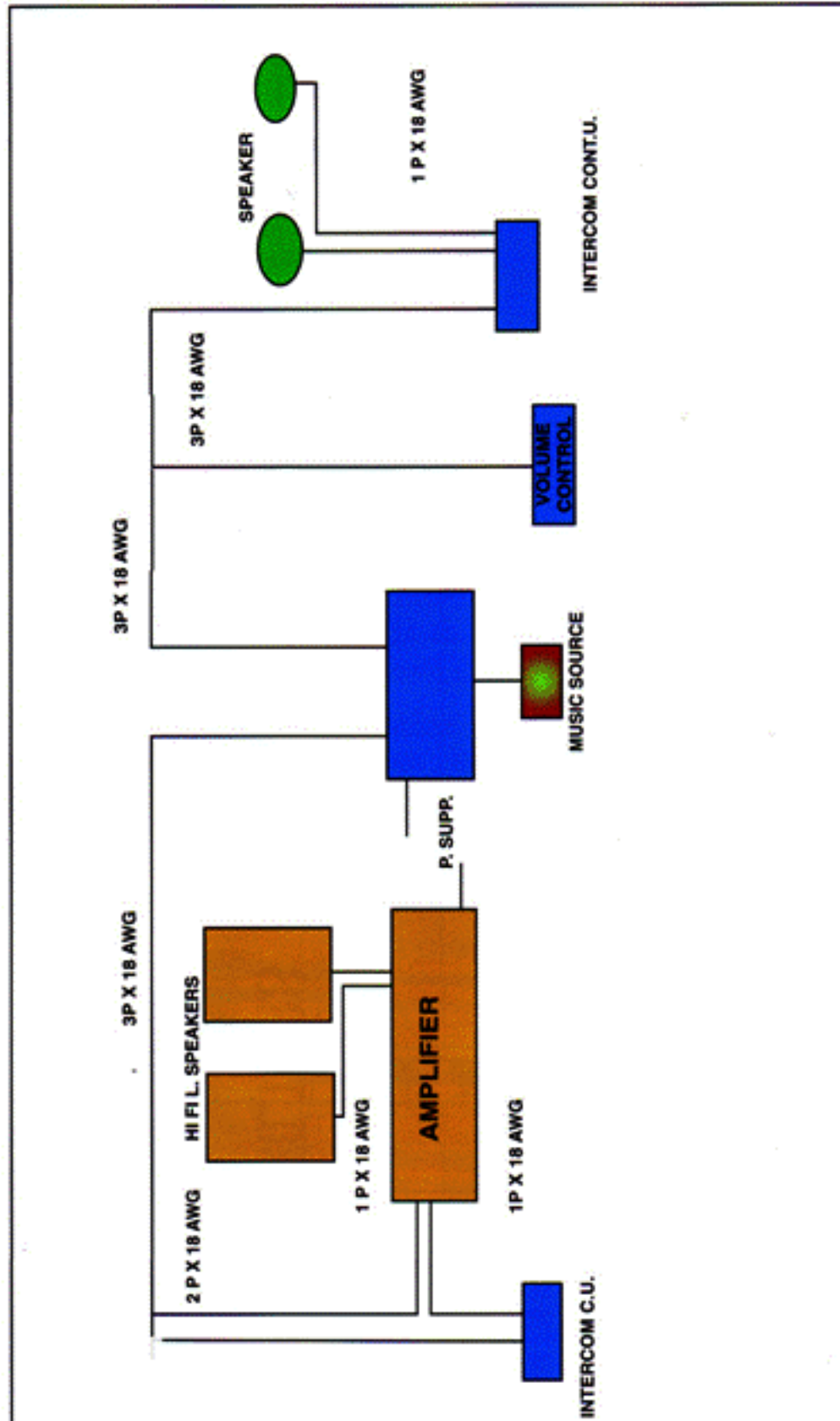
- **Common fields are :**
 - Intercom / Paging
 - Audio / Security
 - Sound & Background Music

- **For clock network same cables can be used
(System's schematic building cabling circuits is enclosed)**

SELCOPLAST CABLES



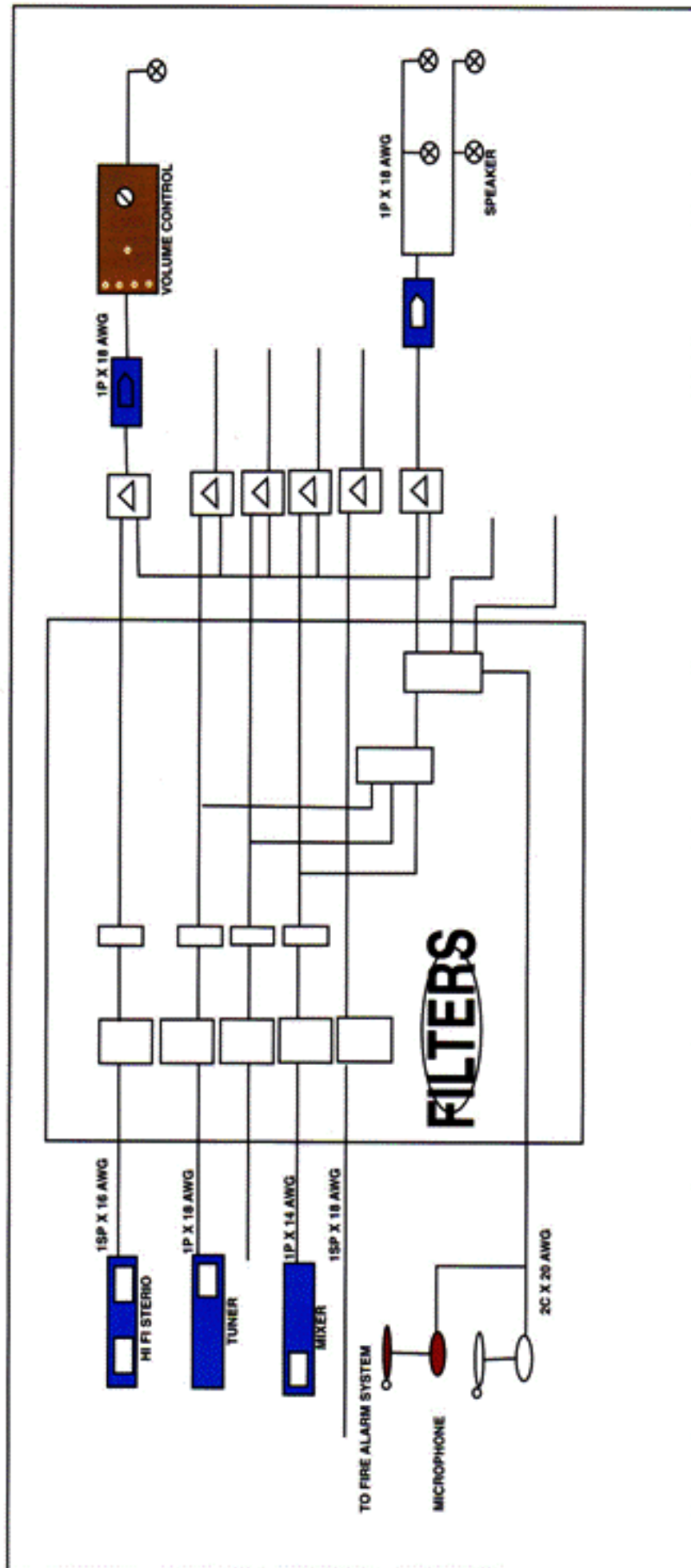
PUBLIC ADDRESS SYSTEM



SELCOPLAST CABLES



SINGLE LINE DIAGRAM
SCHEMATIC DIAGRAM
PUBLIC ADDRESS SYSTEM



SELCOPLAST CABLES



PUBLIC ADDRESS SYSTEM SPEAKER CABLE

**14 AWG
(19 X 27)**

Description : Stranded tinned copper, PVC insulated, twisted pair, overall aluminum polyester shield, 16 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black & White.

| NEC Type Voltage grade | No. of Cond. | Packing lengths | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|--------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|---------------------|-------|------|-------|
| | | m | ft | | kg | mm | inch | mm | Inch | mm | Inch | c/c | | c/s |
| | | | | pF/m | | | | | | | | pF/ft | pF/m | pF/ft |
| NEC Type CL3 300V | 2 | 1000 | 3280 | 75 | 0.36 | 0.014 | 0.64 | 0.025 | 6.9 | 0.271 | 249 | 76 | 449 | 137 |

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

COMMUNICATION & CONTROL CABLE

**20 AWG
(7 X 28)**

Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket. Color code : Black & Red.

| NEC Type Voltage grade Temp | No. of Cond. | Packing length | | Approx. weight | Insulation thickness | | Jacket thickness | | Nominal O.D. | |
|-----------------------------------|--------------------|-------------------|------|-------------------|-------------------------|-------|---------------------|-------|-----------------|-------|
| | | m | ft | | kg | mm | inch | mm | inch | mm |
| NEC Type CM 300V,90°C | 2 | 304.8 | 1000 | 9 | 0.38 | 0.015 | 0.64 | 0.025 | 4.5 | 0.180 |

**16 AWG
(19 X 29)**

Description : Stranded tinned copper, PVC insulated, twisted pair, Grey PVC jacket. Color code : Black & White.

| | | | | | | | | | | |
|--------------------------|---|-------|------|----|------|-------|------|-------|-----|-------|
| NEC Type CM 300V,90°C | 2 | 304.8 | 1000 | 18 | 0.58 | 0.023 | 0.81 | 0.032 | 6.9 | 0.274 |
|--------------------------|---|-------|------|----|------|-------|------|-------|-----|-------|

**14 AWG
(42 X 30)**

Description : Stranded tinned copper, PVC insulated, twisted pair Gray PVC jacket. Color code : Black, White.

| | | | | | | | | | | |
|---------------|---|-------|------|----|------|-------|------|-------|-----|-------|
| CL3,600V,90°C | 2 | 304.8 | 1000 | 28 | 0.81 | 0.032 | 0.81 | 0.032 | 8.7 | 0.340 |
|---------------|---|-------|------|----|------|-------|------|-------|-----|-------|

**12 AWG
(65 X 30)**

Description : Stranded tinned copper, PVC insulated, twisted pair Gray PVC jacket. Color code : White & Black.

| | | | | | | | | | | |
|---------------|---|-------|------|----|------|-------|------|-------|-----|-------|
| CL3,600V,90°C | 2 | 304.8 | 1000 | 38 | 0.81 | 0.032 | 0.89 | 0.035 | 8.6 | 0.386 |
|---------------|---|-------|------|----|------|-------|------|-------|-----|-------|

SELCOPLAST CABLES



PUBLIC ADDRESS SYSTEMS ANALOG VIDEO & AUDIO CABLES

**12 AWG
(19 X 25)**

Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 14 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black, clear.

| NEC Type Voltage grade | No. of Pairs | Packing lengths | | Approx. weight kg | Insulation thickness | | Jacket thickness | | Nominal O.D. | | Nominal Capacitance | | | |
|---------------------------|--------------------|--------------------|------|-------------------------|-------------------------|-------|---------------------|-------|-----------------|------|---------------------|-------|------|-------|
| | | m | ft | | mm | inch | mm | inch | mm | inch | c/c | | c/s | |
| | | | | | | | | | | | pF/m | pF/ft | pF/m | pF/ft |
| NEC Type CL2 600V 80°C | 1 | 1000 | 3280 | 150 | 0.94 | 0.037 | 1.02 | 0.040 | 10.8 | 0.42 | 82 | 25 | 161 | 49 |

**16 AWG
(19 X 29)**

Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 18 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black & clear.

| | | | | | | | | | | | | | | |
|---------------------------|---|------|------|----|------|-------|------|-------|------|------|----|----|-----|----|
| NEC Type CL2 600V 80°C | 1 | 1000 | 3280 | 81 | 0.81 | 0.032 | 0.81 | 0.032 | 7.87 | 0.31 | 75 | 23 | 144 | 44 |
|---------------------------|---|------|------|----|------|-------|------|-------|------|------|----|----|-----|----|

**20 AWG
(7 X 28)**

Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 20 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black & clear.

| | | | | | | | | | | | | | | |
|--------------------------|---|------|------|----|------|-------|------|-------|-----|-------|----|----|-----|----|
| NEC Type CM 300V 80°C | 1 | 1000 | 3280 | 35 | 0.41 | 0.016 | 0.71 | 0.028 | 5.5 | 0.216 | 88 | 27 | 160 | 48 |
|--------------------------|---|------|------|----|------|-------|------|-------|-----|-------|----|----|-----|----|

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

**22 AWG
(7 X 30)**

Description : Stranded tinned copper, polyethylene insulated, twisted pair, aluminum polyester shield, 22 AWG stranded tinned copper drain wire, Grey PVC jacket. Color code : Black & clear.

| | | | | | | | | | | | | | | |
|--------------------------|---|-------|------|-----|------|-------|------|-------|------|-------|----|----|-----|----|
| NEC Type CM 300V 80°C | 1 | 304.8 | 1000 | 8.1 | 0.41 | 0.016 | 0.64 | 0.025 | 4.74 | 0.186 | 79 | 24 | 154 | 47 |
|--------------------------|---|-------|------|-----|------|-------|------|-------|------|-------|----|----|-----|----|

C/C – Capacitance between conductors.

C/S – Capacitance between one conductor and other conductors connected to shield.

SELCOPLAST CABLES



PILOT CABLE (12 PAIR X 0.9 mm)

ELECTRIC CABLE - TELEPHONE" 12P X 0.9 mm

Application : Used in Telecommunication Network and Protection System.

Specification : SCECO-C TS16.10/Rev.4

Construction

- **Conductor** : Solid annealed plain copper conductor of 0.9 mm.
- **Insulation** : Solid polyethylene to ASTM D1248.
- **Conductor Identification** : Insulated conductors shall be fully colour coded as per Table-2 of Spec. TS16.10/Rev.4.
- **Assembly** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 30 to 200mm to minimize crosstalk. Twelve pairs shall be assembled together to form the cable core.
- **Core Filling** : The water resistant filling compound shall be applied to the air space within the cable core.
- **Core Wrapping** : A polyester or polypropylene tape or any approved material shall be applied longitudinally or helically with an overlap.
- **Moisture Barrier/Shield** : An Aluminium tape (0.2mm) coated on both sides with a copolymer shall be applied longitudinally over the core wrap with a minimum overlap of 6.5mm.
- **First (inner) Sheath** : The sheath shall be an extruded Black low density polyethylene to ASTM D1248.
- **Armouring** : Armour material shall be of Galvanized Round Steel Wire and shall be applied over the inner sheath.
- **Second (Outer) Sheath** : The sheath shall be an extruded black low density polyethylene to ASTM D1248.
- **Sheath Marking** : "SCECO ELECTRIC CABLE - TELEPHONE" 12PX0.9MM MESC YEAR & Sequential Length Marking shall be placed on the sheath.

SELCOPLAST CABLES



PILOT CABLE (12 PAIR X 0.9 mm)

| SIZE (mm) | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 0.9 | 12X2X0.9 | 23.0 | 1075 | 1000 | 1250 |

TRANSMISSION CHARACTERISTICS

| | | | | |
|---|-----------|--------------------|-------|------|
| Max. Conductor Loop Resistance (20°C) | Ohms/Km | Max. | 58.2 | |
| Insulation Resistance (20°C) | MOhm-Km | Min. | 1000 | |
| Mutual Capacitance (1000+/-200Hz) | nF/Km | Average | 71 | |
| Capacitance Unbalance (1000+/-200Hz) | pF/500m | Average | 180 | |
| | | Ind | 500 | |
| Dielectric Strength (Volts DC for 3 Sec.) | | Cond-Cond | 10000 | |
| | | Cond-Shld & Armour | 15000 | |
| Attenuation (max.) | Frequency | dB/Km | Max. | |
| | 300 KHz | | | 0.46 |
| | 800 KHz | | | 0.76 |
| | 1000 KHz | | | 0.85 |
| | 2000 KHz | | | 1.20 |
| | 2500 KHz | | | 1.34 |
| | 3000 KHz | 1.56 | | |

SELCOPLAST CABLES



34 CORE PILOT CABLE



Application : Used in Solkor protection system & intertripping and interlocking system.

Specification : MEK Kuwait & ESI 09-6

Construction of 34C (3P \times 2.5mm² + 14P \times 0.635mm²) pilot cable

- **Conductor** : Solid annealed plain copper conductor of 1.78 mm for 2.5 mm² and 0.9 mm for 0.635 mm².
- **Insulation** : Solid polyethylene to ASTM D1248, with nominal thickness of 0.8 mm.
- **Conductor Identification** : Insulated conductors shall be fully coded as per Spec. ESI 09-6.
- **Twisting** : Two insulated conductors shall be uniformly twisted together to form a pair with staggered twist lengths of 150mm max.
- **Pair Shielding (Applicable for 2.5mm² pairs only)** : Copper tape of 0.075 mm thickness shall be applied over the twisted pair, with 100% coverage.
- **Cable laying** : Such 3 individually shielded pairs and 14 unshielded pairs shall be laid up to form a compact cable, cable core as per the spec. A polyester or polypropylene tape shall be applied over the laid up cable core.
- **Bedding** : The bedding material shall be Polyethylene with a nominal thickness of 1.8 mm.
- **Overall Screening** : A copper tape of 0.075 mm thickness shall be applied over the Bedding with 100% coverage.
- **Inner Sheath** : The inner sheath material shall be polyethylene which shall be extruded over the copper tape screening with a nominal thickness of 1.0 mm.
- **Armouring** : The armouring material shall be Galvanized Round Steel Wire of 2.0 mm.
- **Outer Sheath** : The outer sheath material shall be PVC Type-9 of BS:6746 in Black colour with a minimum thickness of 1.9 mm.
- **Cable Marking** : "PILOT CABLE" 6CX2.5MM²+28CX0.635MM² MESC YEAR MEK shall be done on the outer sheath of the cable.

SELCOPLAST CABLES



34 CORE PILOT CABLE

| SIZE Core | Size (No. xmm) | Approx. O.D. (mm) | Approx. Cable Wt. (Kg.) | Packing Length (m) | Drum Flange Dia. (mm) |
|-----------|----------------|-------------------|-------------------------|--------------------|-----------------------|
| 34 | 6X2.5+28X0.635 | 41.0 | 2560 | 500 | 1600 |

TRANSMISSION CHARACTERISTICS

| Test Characteristics | Unit | -- | 2.5mm ² | 0.635mm ² |
|-----------------------------------|----------------------|-------|--------------------|----------------------|
| Conductor Resistance (20°C) | Ohms/Km | Max. | 7.41 | 28.48 |
| Mutual Capacitance (1000+/-200Hz) | Micro Farad/Km | Max. | 0.04 | 0.07 |
| Attenuation at 10°C Frequency | 1000 Hz | dB/km | Max. Nom. | -- 0.77 0.70 |
| Impedance Frequency | 1000 Hz | Ohms | Nom. | -- 490 |
| Cross talk Frequency | 1300 Hz | dB | Min. | -- 74 |
| Withstand Voltage | KV rms for 3 seconds | | 15 | 15 |

TECHNICAL INFORMATION

SELCOPLAST CABLES



SELCOPLAST CABLES



TECHNICAL INFORMATION

COAXIAL CABLE PARAMETERS

Electrical

| | | | |
|--------------------------|--|-------------------------|--|
| Capacitance | $C = \frac{24.148 \epsilon}{\text{Log} \left \frac{D}{d} \right } \text{ pF/m}$ | Inductance | $L = 0.459 \text{ Log} \left \frac{D}{d} \right \mu \text{ H/m}$ |
| Characteristic Impedance | $Z_0 = \frac{138}{\sqrt{\epsilon}} \text{ Log} \left \frac{D}{d} \right \text{ Ohm}$ | Velocity of Propagation | $V_p = \frac{100}{\sqrt{\epsilon}} \%$ |

TABLE

| Insulation Materials | Dielectric Constant ϵ |
|-----------------------|--------------------------------|
| Cellular Polyethylene | 1.56 |
| Solid Polyethylene | 2.26 |

Braiding Details

Braid angle $\theta = \tan^{-1} \frac{2 \pi (D+e) P}{C}$ Degrees

Braid picks per cm $P = \frac{0.394 (C) \tan \theta}{2 \pi M}$

Braid angle $R = \frac{r}{n(C) (\cos \theta)}$ Ohms/Km

- | | |
|----------------------------------|--|
| D = diameter under shield in mm. | n = number of wires in one carrier. |
| C = number of carriers. | M = D + build of braid on one shield wall in mm. |
| e = diameter of each wire in mm. | R = DC Resistance of the Braid in Ohms / Km. |
| P = picks per cm. | r = DC Resistance of each wire in Ohms / Km. |
| θ = braid angle. | |

SELCOPLAST CABLES



TECHNICAL INFORMATION

ELECTRICAL PARAMETERS FOR PLTC CABLES SPECIFICATION UL13

| TEST PARAMETERS | 22 AWG | 20 AWG | 18 AWG | 16 AWG |
|--|-----------|-----------|-----------|-----------|
| Conductor Resistance at 20°C (Ω/Km) Max. | | | | |
| Uncoated copper | 57.6 | 35.8 | 22.8 | 14.2 |
| Coated copper | 59.7 | 37.2 | 23.6 | 14.9 |
| Insulation Resistance at 20°C (MΩ-Km) Min.(XLPE) | | | 1000 | |
| Spark Test Voltage (Volts) r.m.s. | | | 1750 | |
| Dielectric withstand Test (Volts DC for 2 Seconds) | | | 2500 | |

DESIGN PARAMETERS FOR BALANCED PAIRS

Capacitance (C)

$$\text{Unshielded Twisted Pair} \\ = \frac{7.218 \epsilon}{\text{Log} \frac{1.3 (D)}{f (d)}}$$

$$\text{Shielded Twisted Pair} \\ = \frac{12.14 \epsilon}{\text{Log} \frac{1.2 (D)}{f (d)}}$$

$$\text{Overall Shielded \& Cabled} \\ = \frac{9.515 \epsilon}{\text{Log} \frac{1.5 (D)}{f (d)}}$$

Impedance Zo (ohms)

$$\text{Unshielded Twisted Pair} \\ = \frac{310 \sqrt{\epsilon}}{C}$$

$$\text{Shielded Twisted Pair} \\ = \frac{276}{\sqrt{\epsilon}} \text{Log} \frac{1.2(D)}{f (d)}$$

$$\text{Overall Shielded \& Cabled} \\ = \frac{347}{\sqrt{\epsilon}} \text{Log} \frac{1.5(D)}{f (d)}$$

- where C = Mutual capacitance in pF/m.
 ϵ = Dielectric constant of insulation Material (Refer Table 1)
 f = Stranding factor (Refer Table 2)
 Vp = Velocity of propagation (Percentage of Velocity of Light)
 D = Diameter over insulation in mm.
 d = Diameter over conductor in mm.

TABLE 1

| Insulation Material | Dielectric Constant | Vp(%) |
|-----------------------|---------------------|-------|
| PVC | 5.0 | 45 |
| PVC(Semi-Rigid) | 4.6 | 47 |
| Polyethylene | 2.26 | 66 |
| Cellular Polyethylene | 1.56 | 82 |
| Polypropylene | 2.2 | 67 |

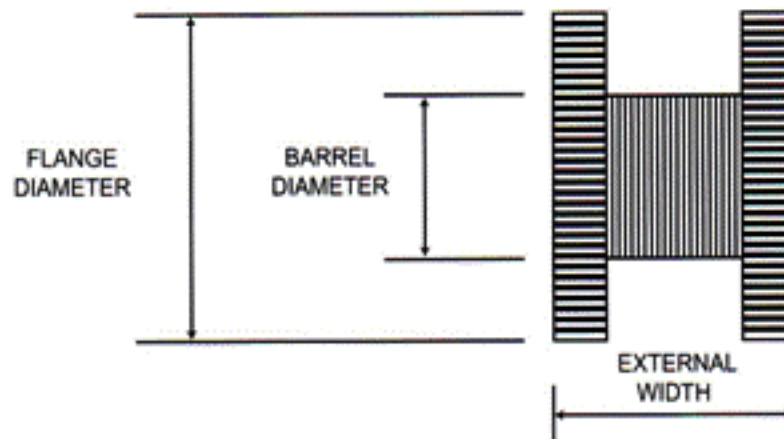
TABLE 2

| Number of Strands | Stranding Factor (f) |
|-------------------|----------------------|
| 1 | 1.000 |
| 7 | 0.939 |
| 19 | 0.970 |
| 37 | 0.980 |

SELCOPLAST CABLES



TECHNICAL INFORMATION



DIMENSIONS AND WEIGHTS

| REEL SIZE | FLANGE DIAMETER (mm) | BARREL DIAMETER (mm) | EXTERNAL WIDTH (mm) | EMPTY REEL WT (APPROX.) (KG.) |
|-----------|----------------------|----------------------|---------------------|-------------------------------|
| D - 5 | 500 | 250 | 372 | 9 |
| D - 6 | 630 | 315 | 472 | 14 |
| D - 7 | 710 | 355 | 522 | 18 |
| D - 8 | 800 | 400 | 572 | 25 |
| D - 9 | 900 | 450 | 632 | 32 |
| D - 10 | 1000 | 500 | 726 | 40 |
| D - 11 | 1100 | 560 | 806 | 60 |
| D - 12 | 1250 | 630 | 896 | 85 |
| D - 14 | 1400 | 710 | 996 | 105 |
| D - 16 | 1600 | 800 | 1120 | 175 |

GUIDELINES FOR SELECTION OF REELS

| Reel Size | Cable length = 1000 Meter Cable Ø Range mm | | Cable Length = 500 Meter Cable Ø Range mm | |
|-----------|--|---------|---|---------|
| | D-5 | Upto | 4.4 | Upto |
| D-6 | 4.5 | to 7.4 | 6.7 | to 10.5 |
| D-7 | 7.5 | to 9.2 | 10.6 | to 13.0 |
| D-8 | 9.3 | to 11.3 | 13.1 | to 15.8 |
| D-9 | 11.4 | to 13.6 | 15.9 | to 19.4 |
| D-10 | 13.7 | to 16.0 | 19.5 | to 23.4 |
| D-11 | 16.1 | to 19.3 | 23.5 | to 27.2 |
| D-12 | 19.4 | to 24.0 | 27.3 | to 33.0 |
| D-14 | 24.1 | to 28.6 | 33.1 | to 39.6 |
| D-16 | 28.7 | to 35.4 | 39.6 | to 47.0 |

SELCOPLAST CABLES



TECHNICAL INFORMATION

MAXIMUM PULLING TENSIONS

The maximum tension must not be exceeded when pulling a cable into ducts and conduits:

a. Using a pulling eye:

$$T_m = 7.16 \times n \times A$$

T_m = Maximum tension, (Kg)

n = No of conductors

A = Area of each conductor, sq. mm

b. Using a cable grip:

$$T_g = \pi \times k \times t \times (D - t)$$

T_g = Maximum Tension, (Kg)

t = Jacket thickness, mm

D = Cable overall diameter, mm

k = 0.7 Kg/sq.mm for PVC, PE & Neoprene

The tension required to pull the cable in a straight duct can be calculated as follows:

$$T_s = L \times w \times f$$

T_s = Tension required to pull cable, Kg.

L = Length of cable, m

w = Weight of cable, Kg/m

f = Co-efficient of friction

Coefficient of friction

| Duct Material | Jacket Material | | |
|-----------------|-----------------|------|----------|
| | PE | PVC | Neoprene |
| Asbestos Cement | 0.56 | 0.56 | 0.68 |
| Rigid PVC | 0.34 | 0.52 | 0.53 |
| Metal | 0.36 | 0.55 | 0.60 |

SELCOPLAST CABLES



**GUIDANCE OF HANDLING,
STORAGE AND INSTALLATION
OF POWER CABLES**

SELCOPLAST CABLES



CONTENTS

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| Cable Handling and Installation Instructions (Appendix II)..... | 7 | | |
| Repairs to PVC Oversheaths (Appendix III)..... | 8 | 9 | |
| Installation of Single Core Cables (Appendix IV)..... | 10 | | |
| Drum Handling..... | 11 | 12 | 13 |

SELCOPLAST CABLES



GUIDANCE ON HANDLING, STORAGE AND INSTALLATION OF POWER CABLES

1. HANDLING

Damage to cables can occur due to the incorrect handling to which the drums and cables may be subjected, causing breakdown of the drum flanges and in exceptional cases, movement of the drum barrel takes place. Once this breakdown of the drum occurs, the cable is immediately exposed to damage.

For guidance on handling, please refer to the sketches and notes contained in this booklet, which should be followed closely. We have no objection to the use of fork-lift trucks providing that care is exercised not to damage, or remove, the protective battens when pushing the 'forks' under the drum flanges. Unloading can also be safely accomplished by means of ramps and winches. (See Figs.1 & 2).

Under no circumstances should a drum be rolled off a vehicle on to a 'cushion' of sand, tarpaulin, etc. This action could crumple the flanges and barrel of the drum, driving splinters and/or nails into the cable. (See Fig. 5).

2. STORAGE

If at any time the drums of cable are required to be stored for reasonably long periods, e.g. prior to shipment or installation, the following points should be noted.

- 2.1 The site for storage of drums should be well drained, hard packed soil, or preferably a concrete surface, which will not allow the drums to sink and so give rise to damage due to the extreme difficulty in moving drums after they have sunk into the ground.
- 2.2 All drums should be stored with the battens intact, and in such a manner as to leave sufficient space between them for air circulation. Check and tighten tie bolts on the drums at regular intervals.
- 2.3 Tier stacking of drums is not recommended. In no circumstances must the drums be stored 'on the flat', i.e. with flanges horizontal. (See Fig. 3).
- 2.4 All drums, during installation (i.e. when the battens have been removed), should be 'scotched' so that there is no danger of the flanges of drums coming into accidental contact with unprotected cable on other drums. The cables should not be left unprotected.
(See Fig. 3).

IMPORTANT : Cable ends must be sealed with end caps during storage and transportation.

SELCOPLAST CABLES



GUIDANCE ON HANDLING, STORAGE AND INSTALLATION OF POWER CABLES

3. INSTALLATION

3.1 Minimum Temperature during installation

To avoid risk of damage during handling, the cable should be installed only when both the cable and ambient temperature are above 0°C and precautions have been taken to maintain the cable above this temperature. However, the cables are suitable for operating at temperatures between below 0°C and the specified maximum limit, provided that they are not bent or struck when at temperatures below 0°C.

3.2 Laying

Distribution cables are usually supplied on wooden drums and great care should be taken during running off to ensure that the cable does not kink. The drum position should be chosen so that the longest length of straight trench is at the pulling end, with any severe bends as close as possible to the drum.

It is important that the rolling of the drum to this position should be in accordance with the arrow on the flange - to prevent loose turns from developing during unwinding. The distance of rolling should be kept to a minimum.

Drums should be mounted so that the cable is pulled from the top of the drum, and for very heavy cable, it may be necessary to use a ramp to support the cable during the passage into the trench. As the cable is run off, the drum will rotate in the opposite direction to the arrow on the "ROLL THIS WAY" marking.

The excavated trench should be carefully examined to ensure that there are no sharp edged stones, foundations, reinforcing metalwork, etc. which could damage the cable, and sieved earth or sand should be used as a bedding.

Preparation of the trench, prior to installing the cable, comprises the installation of skid plates, rollers, etc. and paying out the winch rope, if using power assistance. Cable rollers are necessary to prevent the cable from touching the ground, and should be spaced a maximum of 2m apart for normal size cables. Correct positioning of rollers is important to keep friction to a minimum.

SELCOPLAST CABLES



GUIDANCE ON HANDLING, STORAGE AND INSTALLATION OF POWER CABLES

3.2 Laying - cont'd...

The cable should preferably be drawn to its final position in a continuous manner. During stops, the cable will settle between rollers and may cause high strain on men and machines during restarting. Whether the pulling is manual or with a winch, it is necessary for one man to be stationed at the drum with a plank of wood wedged against the flange of the drum so that over-running of the drum is prevented if the pulling stops. Otherwise, many loose turns can easily develop on the drum.

When pulling by a winch it is advantageous for the cable end to be taken by hand as far as possible before attaching the winch rope. This allows the leading cable rollers, skid plates, etc. to take the load and settle under well-controlled conditions. The winch operator must, at all times, carefully observe the dynamometer to prevent overloading. On long pulls, good communication is essential, preferably by radio.

When using a power winch, more attention has to be given to the maximum pulling load which is permissible. For such installations a pulling eye attached to the conductors is necessary, and for copper conductors a pulling tension of 6 kg force per sq.mm of total conductor area can be applied (with the proviso of 2000 kg force maximum).

Graphite paste should be used for lubrication when cables are being pulled into ducts.

For open trench and straight installations, a cable 'stocking' can be used. It is advisable, however, to protect the PVC oversheath with a layer of bitumen tape applied with 50% overlap.

Cables should never be bent to a small radius. As large a radius as space permits should be adopted. Under no circumstances should the bending radius be less than the minimum permissible limits. It is particularly important to have a generous bending radius when cables are to be pulled by a power winch, so as to keep within the maximum permissible pulling tension and to prevent the cable being flattened around bends or in ducts.

SELCOPLAST CABLES



GUIDANCE ON HANDLING, STORAGE AND INSTALLATION OF POWER CABLES

3.3 Final placing of cable

Before disconnecting the pulling rope, the cable is laid off, i.e. starting at one end, it is carefully lifted from the rollers and deposited on the bottom of the trench. About 10m of cable should be lifted at one time, any slack being carried forward. The end position of a cable run may require double handling because it is not possible to draw cables straight into buildings. In this case the cable is overpulled, then man-handled into the required position. At all times the loops should be kept as large as possible so that the bending radius is always above the minimum permitted.

Similarly, at the drum locations the necessary length of cable may be unwound from the drum and laid out, in a figure of '8' if space is limited, prior to cutting to length and placing into position. Immediately after cutting, the cable ends must be suitably sealed to prevent ingress of moisture. In this respect it is also important to carefully examine the pulling end seal to ensure that it has not been damaged during laying. (See Figs. 14 & 15).

3.4 Backfilling and Reinstatement

Prior to backfilling, it is necessary to carry out a visual inspection, and items which need to be checked are:

- 3.4.1 The cables have a suitable bedding, such as sieved sand or soil. Stone chips and other sharp objects in the cable route should be removed.
- 3.4.2 The spacing is correct if there is more than one cable in the trench.
- 3.4.3 Pulling equipment is carefully removed.
- 3.4.4 The cable is free from obvious damage caused during installation. A very high proportion of cable failures in service are due to such damage. It may be necessary to inspect the underside with a mirror. In such cases it is advisable to make a first inspection whilst the cable is still on rollers.

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GUIDANCE ON HANDLING, STORAGE AND INSTALLATION OF POWER CABLES

3.4 **Backfilling and Reinstatement** - cont'd....

3.4.5 It is very important that any damage to the oversheath should be repaired before backfilling is commenced. Strict attention to detail is necessary in making such repairs and only the approved materials specified should be used. Depending upon circumstances, heat shrinkable sleeves may be used or one of the methods described in the BICC Cables Handbook, page 427 may be employed for repairs.

3.5 **Backfilling**

The cable should firstly be surrounded and covered with appropriate bedding material, using sand or sieved soil as necessary, to give a compacted cover over the cable. As required, cover tiles or plastic marking tape may then be placed centrally over the cable.

The first layer of backfill should be done manually and compacted by hand until a thickness of approximately 150mm over the tile is reached. Subsequent material may be placed and compacted with mechanical equipment.

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APPENDIX I

ELECTRIC CABLE DRUM HANDLING

A. ROLLING DRUMS

Drums of cable must always be rolled in the direction shown by the arrow painted on the flanges, but such rolling should in any case be kept to a minimum.

B. TURNING DRUMS

The best way to turn a cable drum is to roll it on to two well-greased thin plates or boards about 2 feet square. The plates can then be used as a turntable and the drum can be rotated to the desired direction. The practice of using an iron bar under the bolt head is regarded as extremely dangerous to the operator and is detrimental to the drum.

C. LOWERING OR LIFTING DRUMS

When drums are moved from one level to another, e.g. lorry to ground, wharf to ship, etc., lifting and lowering gear must always be used. When drums are lifted from the upper layer of a tiered stack, care must be taken to ensure that no movement of the bottom layer occurs so as to cause collapse. Drums, whether loaded or empty, and too heavy to be man-handled, should always be slung; they should never be dropped. (See Figs. 1 & 2).

When lifting drums of cable for loading or unloading, spindles must always be used in conjunction with crane slings, chain "brothers" or lifting beams. On no account must any drum be lifted by other means, i.e., by using claw-grabs, wire slings, etc. (See Fig. 1).

When lifting drums of cable weighing more than 2 tons, lifting beams or stretchers between the sling or chain brothers must be used to prevent the flanges crushing on to the cable as illustrated. (See Fig. 1).

Note : Normally the hooks or slings should be close to the drum flanges.

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APPENDIX II

CABLE HANDLING AND INSTALLATION INSTRUCTIONS

A. COMPLIANCE WITH REGULATIONS

The cables shall be installed in accordance with any applicable National Regulations, e.g. the 16th Egypt Edition of the I.E.E. Wiring Regulations of the U.K.

B. INSTALLATION LOCATIONS

The cables can be used indoors or outdoors, but certain reservations are necessary concerning cables for direct burial in the ground. For example, it is not recommended that the cables be installed in sustained wet conditions or other aggressive environments. Unprotected open cable ends should not be exposed to moisture prior to final termination or jointing.

The cables shall not be subjected to the deleterious effects of chemical substances on installation or subsequently, for example, the cables should not be installed where there is a risk of sustained contamination due to hydrocarbon or chemical spillage.

Where cables are installed in environments in which ultraviolet radiation may occur, account should be taken of any effect this may have on the material of the cable sheath. It is recommended that the cables be shielded from direct sunlight.

C. MINIMUM INSTALLATION RADIUS

None of the cables should be bent during installation with a minimum internal radius of bend less than that recommended for the cable type by the manufacturer.

D. CABLE SUPPORT SPACING

Refer to cable product catalogues regarding recommended spacings for cable supports.

E. PACKING AND HANDLING

It will be obvious that in certain circumstances the packaging of cables, e.g., large heavy drums or sharp edges of metal components of cables could constitute a safety hazard and individuals should therefore take due care for their own safety when handling these items. The springing of the steel binding straps or the dangers arising from projecting nails used to retain battens around the drums or containers are particular examples to which we draw your attention.

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APPENDIX III

REPAIRS TO PVC OVERSHEATHS

During cable drum unpacking, rewinding or laying, damage to the PVC oversheath may accidentally occur. If the cable underneath appears to be in good condition, repair to localised damage at site may be carried out as suggested in the following alternative methods. The objective is that there is no possibility of moisture ingress through damage to the armour or other parts of the cable when it is in its final installed position.

It is very important that any damage to the oversheath observed after installation should be repaired before backfilling is commenced. Strict attention to detail is necessary in making such repairs and only the approved materials specified should be used. Only a brief outline is given below and in case of doubt, the cable manufacturer's advice should be sought. Some of the methods quoted are only suitable for use after installation has been completed, when the cable will not be subjected to significant movement in service.

a) **Superficial damage**

The local area of damage is rubbed down with carborundum strip to the depth of the damage and chamfers of 25mm length are formed at the edges. After cleaning with a suitable solvent*, PVC self-adhesive tape of 25mm width is applied under tension with 50% overlap. The taping is continued up the chamfer until the top is reached. Then another four layers are applied over a length extending 75mm beyond the chamfer.

b) **Holes or slits in PVC oversheaths**

The edges of the hole or slit are chamfered for a distance of 30mm and the area around this is abraded over a length of 20mm. The area is then cleaned with a suitable solvent* and, if bitumen is present under the oversheath, care must be taken to remove it from the prepared surface. A patch is then applied to fill the area using an approved grade of special putty e.g., BICASEAL. This is followed by an overlapped layer of 50mm wide PIB self-amalgamating tape extending 50mm from the patch and three overlapped layers of PVC self-adhesive tape extending 100mm from the edge of the PIB tape. In the case of slits, further strengthening by the addition of an epoxy resin bandage should be made if the cable is likely to be moved.

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APPENDIX III

c) Removal of a complete ring of oversheath

After removal of the damaged ring a chamfer is formed. The surface is then thoroughly cleaned with solvent*, taking care to remove the graphite layer, if present. Four overlapped layers of 50mm wide PIB self-amalgamating tape are then applied at high tension over a length extending to 50mm beyond the original cut. PVC self-adhesive tape is then applied at one-third overlap to build up to a level corresponding to the original oversheath diameter; the length should be up to the end of the chamfer.

Five layers of PVC self-adhesive tape are then applied, each one extending 5mm further along the cable. The repair is completed with a resin poultice reinforcement consisting of six layers of ribbon gauze or bandage impregnated and painted with an approved grade of freshly mixed epoxy resin. This requires about 12 hours to cure.

d) Repairs with HEAT SHRINK Sleeves

Heat Shrink sleeves can be conveniently used to repair the damaged oversheath of cables. Where possible, a full unshrunk sleeve is slipped along the cable up to the point of sheath damage but if the cable ends are inaccessible, a zipped sleeve is used.

Depending upon the nature of damage the location is prepared and cleaned as above and a special putty such as BICASEAL is applied to cover the opening of the sheath. The heat-shrinkable sleeve is then centrally placed over the point of damage and uniformly heated all round with a gas flame or hot air as recommended by the sleeve supplier. It is important to apply heat evenly and adequately to ensure a water-tight grip.

* GENKLENE (ICI) is suitable for these applications.

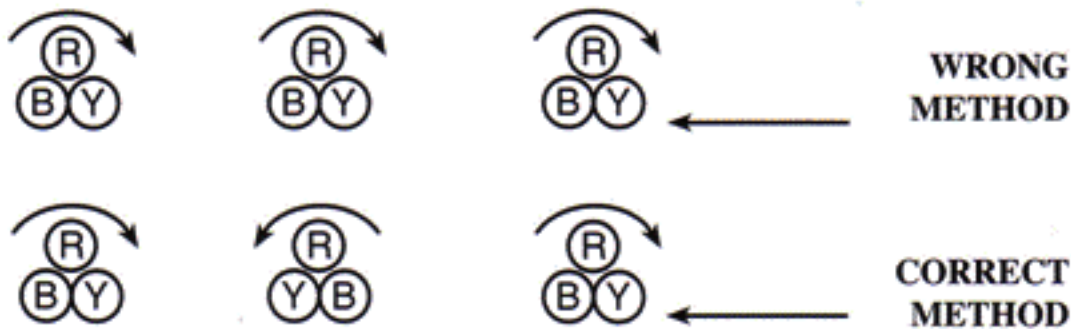
SELCOPLAST CABLES



APPENDIX IV

INSTALLATION OF SINGLE CORE CABLE

1. SINGLE CORE CABLES IN PARALLEL

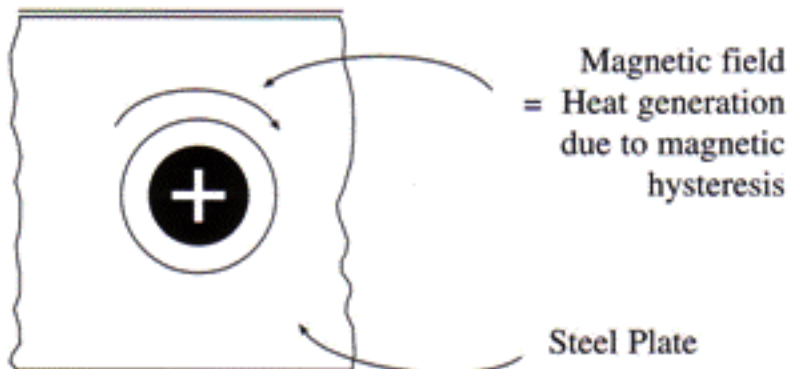


Wrong Method = Unequal load sharing

2. ARMoured SINGLE CORE CABLES

- If bonded at both ends, the armour carries a circulating current.
- An insulated adaptor (BICC Components part design no. 481-AA) used with the cable gland negates the armour circulating current.
- If not bonded at both ends, the unearthed end of the armour has an induced voltage.
- In AC systems, single core cables must have non-ferrous armour.

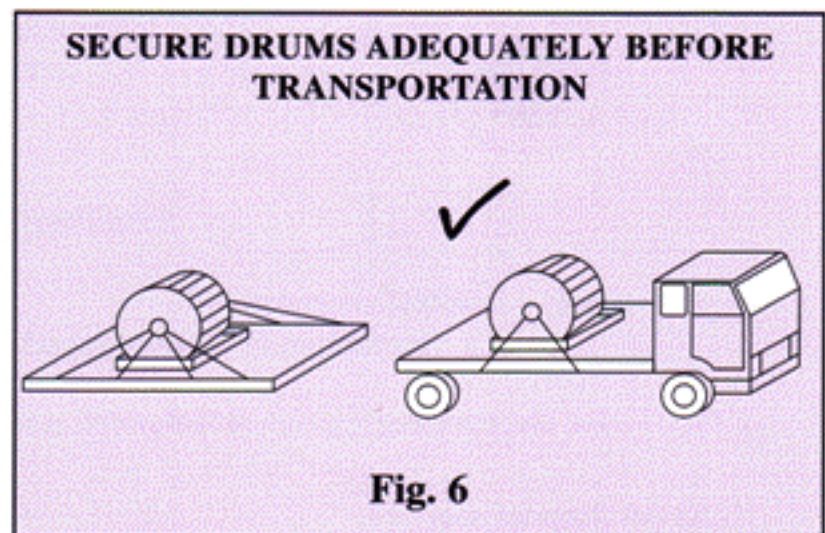
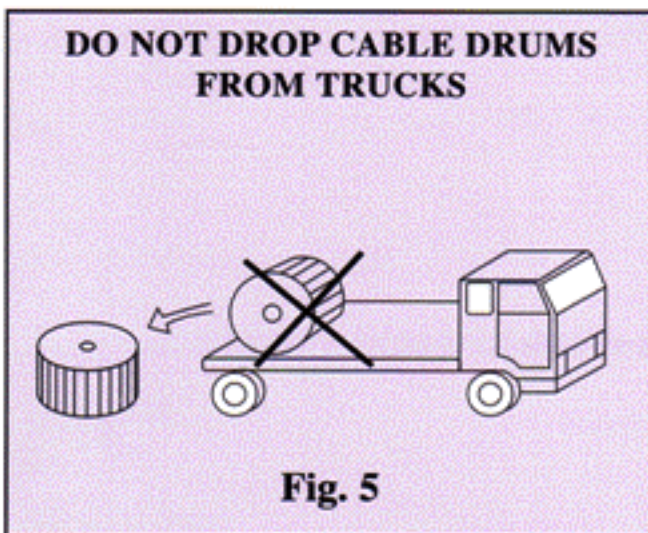
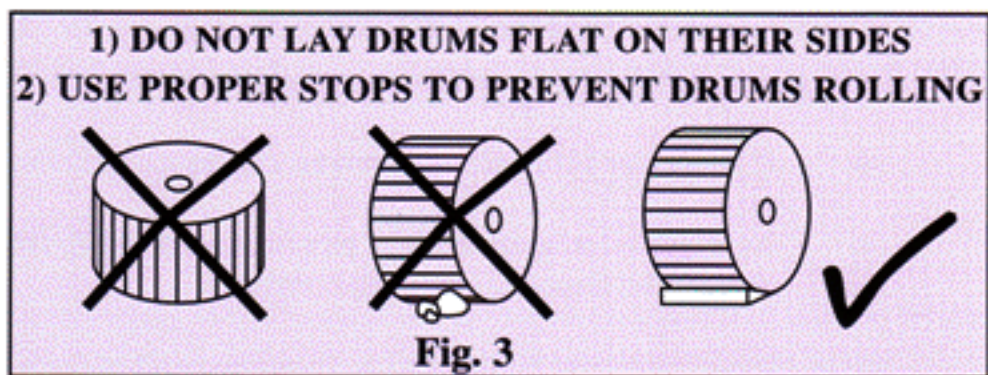
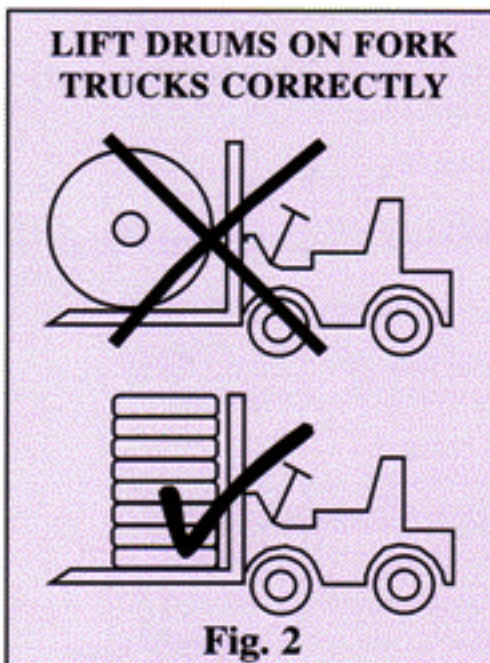
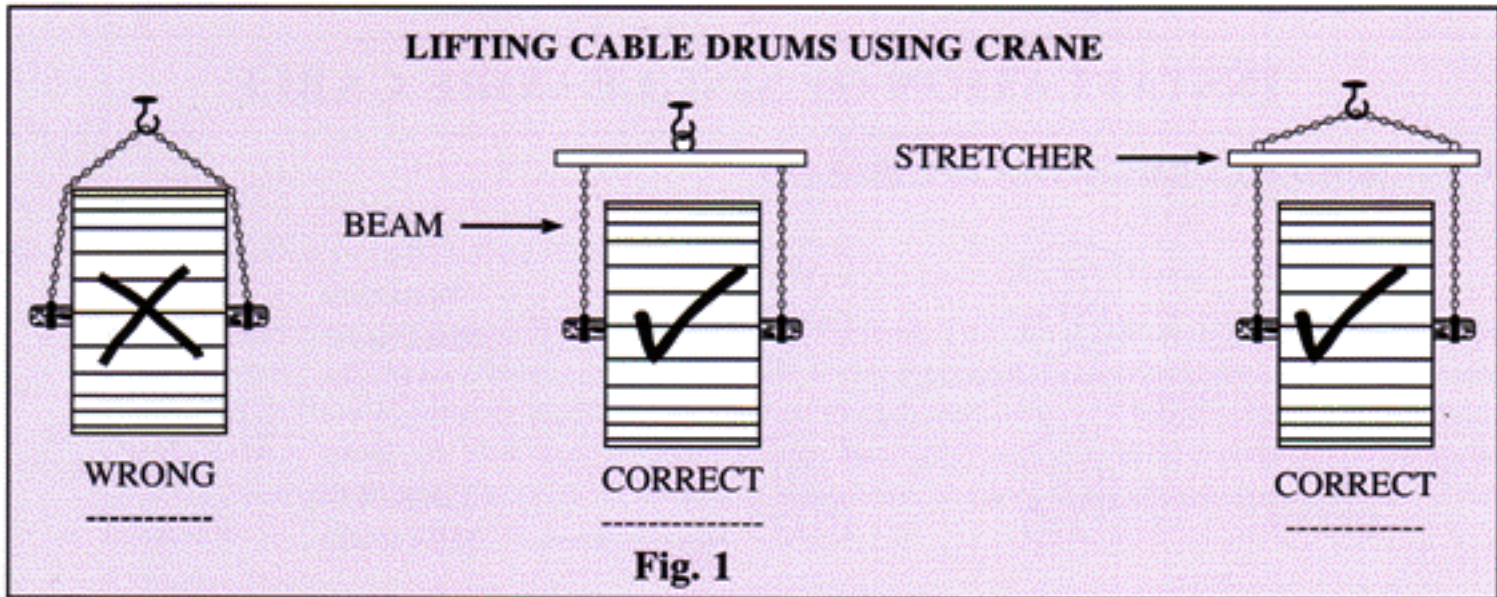
3. HEATING EFFECT ON SINGLE CORE (AC) CABLE WHEN SURROUNDED BY STEEL



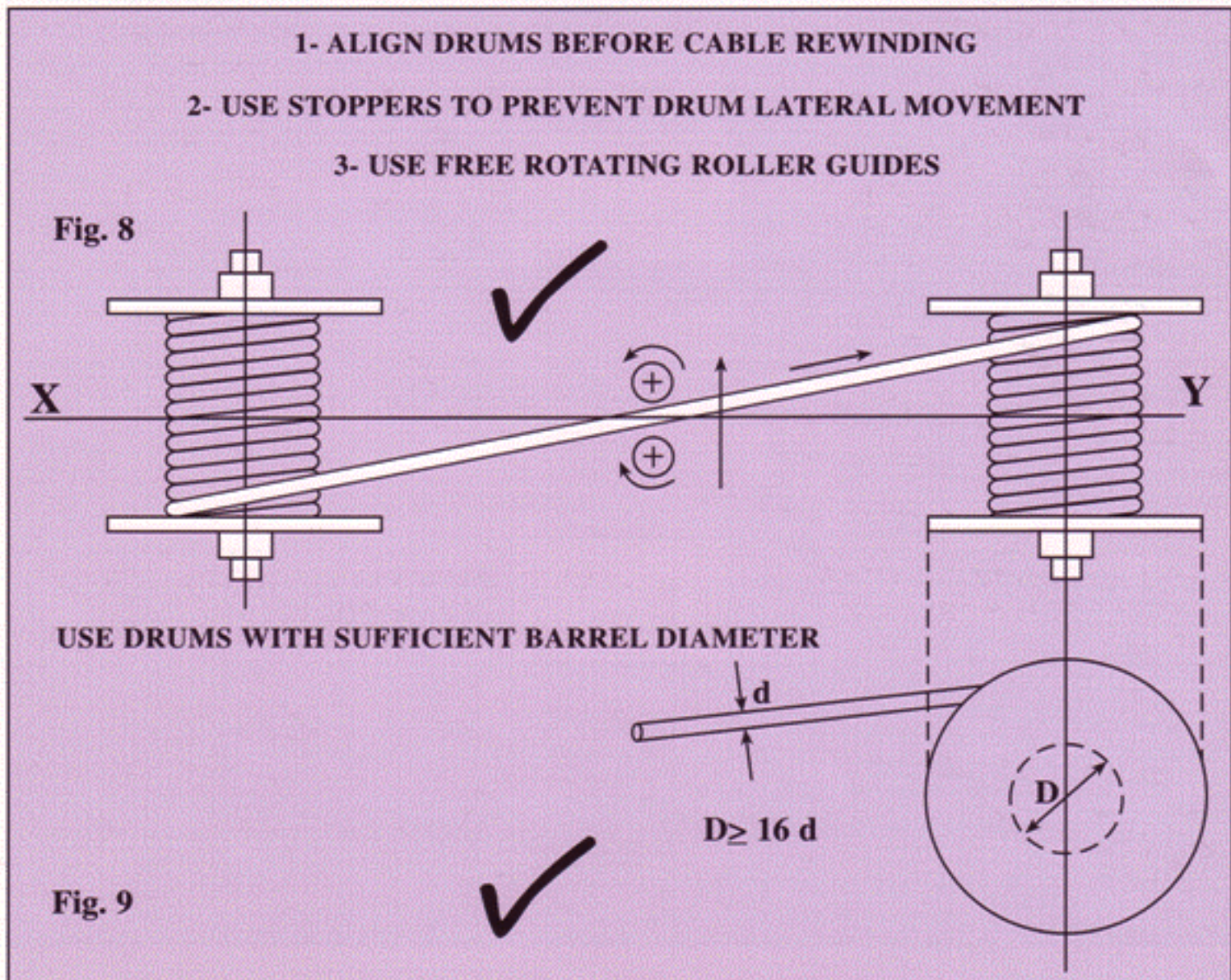
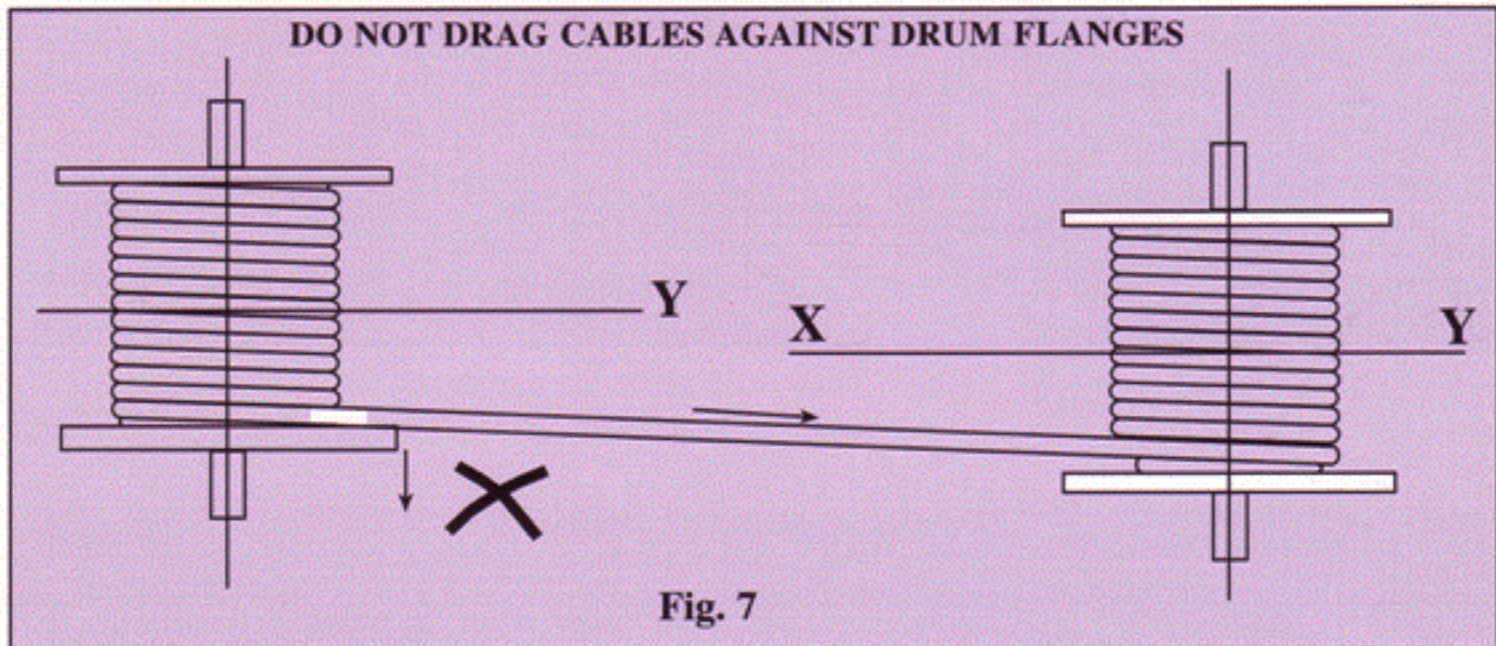
- Use - non-ferrous material
e.g., aluminium or other permissible non-metallic sheet
- Do not pass single core cable through steel conduit

As per diagram supplied.

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DO NOT PULL CABLE ACROSS LONG UNSUPPORTED SPANS

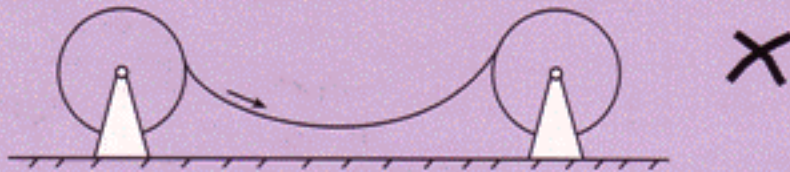


Fig. 10

DO NOT ATTEMPT "COILING" OF CABLE ON THE GROUND

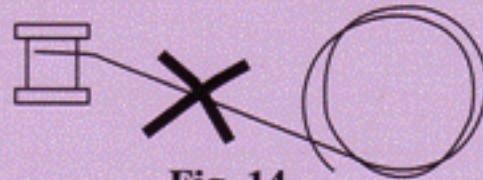


Fig. 14

DO NOT DRAG CABLE AGAINST SHARP EDGES

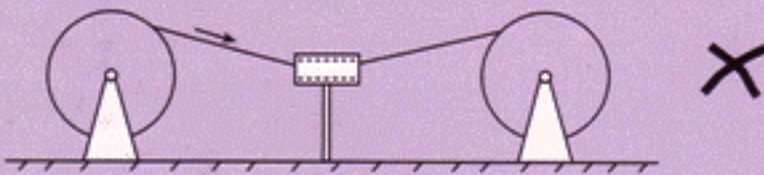
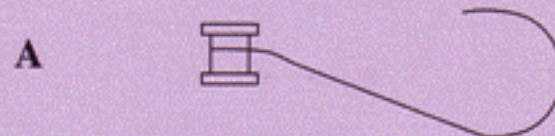


Fig. 11

ON THE GROUND CABLE CAN BE FLAKED IN A FIGURE OF EIGHT FORMATION



NOTE: $R \geq$ Minimum permissible bending radius of cable

Fig. 15

PROVIDE FREELY ROTATING ROLLER SUPPORTS

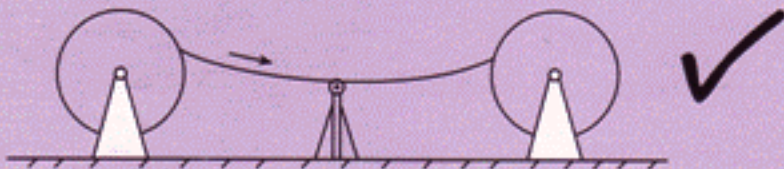


Fig. 12

DO NOT PULL CABLES WITH POWERED VEHICLES

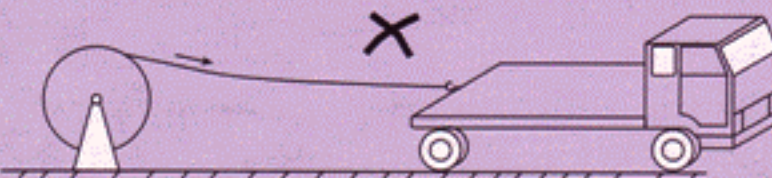


Fig. 13

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ارشادات مناولة وتخزين
وتركيب كابلات الطاقة

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المحتويات

| | | |
|----|----|---|
| 5 | 1 | إرشادات معاملة وتخزين وتركيب كابلات الطاقة |
| | 6 | معاملة بكرة الكابل الكهربائي (الملحق - ١) |
| | 7 | معاملة الكابل وإرشادات التمديدات (الملحق - ٢) |
| 9 | 8 | إصلاح تقوية ال بي في سي (الملحق - ٣) |
| | 10 | تمديد كابل أحادي الوجه (الملحق - ٤) |
| 13 | 12 | 11 معاملة الكابلات |

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إرشادات معاملة وتخزين وتركيب كابلات الطاقة

١ - التسليم

قد يحدث الضرر للكابلات نتيجة للتسليم غير الصحيح التي قد تتعرض لها البكرات والكابلات، مما يسبب تعطل شفة البكرة وفي حالات استثنائية يحدث تحرك برميل البكرة. وما ان يحدث هذا العطل للبكرة يتعرض الكابل مباشرة للأضرار.

وإرشاد للتسليم، يرجى الرجوع الى الرسومات البيانية والملاحظات المتضمنة في هذا الكتيب والتي يجب اتباعها حرفيا. لا اعتراض لدينا على استعمال الشاحنة ذات الرافعة الشوكية بشرط العناية حتى لا يتضرر او يزال الشريط الواقي عند دفع الرافعة الشوكية تحت شفة البكرة. يمكن كذلك انجاز التنزيل بصورة مأمونة عن طريق الممرات المنحدرة والرافعات. (انظر الشكل ٢.٢)

لا يجوز بتاتا دحرجة البكرة من السيارة على وسادة رملية او تربولين وخلافه اذ ان هذا العمل قد يحطم شفة وماسورة البكرة ويدفع بالشظايا و/او المسامير الى داخل الكابل (انظر الشكل ٥)

٢ - التخزين

اذا كانت هنالك حاجة في أي وقت لتخزين بكرات الكابلات لفترة طويلة بصورة معقولة مثلا قبل الشحن او التركيب لابد من ملاحظة النقاط التالية:

١-٢ لابد من تجفيف موقع تخزين بكرات الكابلات بصورة تامة ووضع حشوة في تربة قوية ويفضل ان يكون سطحها خرسانيا لا يسمح بغطس البكر وهكذا يمنع الضرر بسبب الصعوبة في تحرك البكرات اذا غطست في الارض.

٢-٢ يجب تخزين جميع البكرات والالواح الخشبية ملتصقة مع ترك فراغات بينها تسمح بمرور الهواء. افحص وشد صواميل الربط في البكر على فترات منتظمة.

٣-٢ لا يفضل رص البكرات في طبقات ويجب الا يتم تخزين البكر بطريقة مسطحة والشفة في وضع افقي (انظر الشكل ٣)

٤-٢ لابد من وضع اسفين يمنع الانزلاق على جميع البكر عند التركيب (بعد ازالة الالواح الخشبية) حتى لا يكون هنالك خطر اتصال عرضي لشفة البكرة مع الكابل غير المحمي في بكرة اخرى. يجب الا تترك الكابلات غير محمية (انظر الشكل ٣)

هام :

لابد من لحام نهاية الكابلات بغطاء خلال التخزين و الترحيل.

SELCOPLAST CABLES



إرشادات معاملة وتخزين وتركيب كابلات الطاقة

٣. التركيب

١.٣ أدنى درجة حرارة عند التركيب

لتحاشي خطر التضرر اثناء التسليم يجب تركيب الكابل فقط عندما تكون درجة حرارة الجو والكابل صفر درجة مئوية. ولا بد من اتخاذ جميع الاحتياطات للحفاظ على الكابل في درجة حرارة اعلى من هذه الدرجة، في كل الاحوال فان الكابلات مناسبة للتشغيل في درجات حرارة تحت درجة صفر مئوية والحد الاقصى المحدود ذلك بشرط الاتكون مثنية او بها اصابة في درجة حرارة اقل من درجة صفر مئوية.

٢.٣ تمديد الكابلات

يتم عادة توريد كابلات التوزيع على بكرات خشبية ولا بد من العناية الكاملة اثناء التفريغ حتى لا يلتوي او ينعقد الكابل. لا بد من اختبار وضع البكرة بحيث يكون اطول طول للخندق المستقيم عند طرف السحب بحيث تكون أي ثنيات حادة قريبة قدر الامكان من البكرة.

من المهم ان تكون دحرجة البكرة الى هذا الوضع وفقا للسهم الموجود على الشفة- لمنع حدوث الدورات اثناء اللف لا بد من جعل مسافة الدحرجة في حدها الادنى.

لا بد من جعل البكرات محمولة حتى يتسنى سحب الكابل من اعلى البكرة. لا بد من استعمال مجاري انزلاق للكابلات الثقيلة جدا و ذلك لدعم الكيبل خلال مروره في الخندق. فبينما تنحل لغة الكابل تدور البكرة في الاتجاه المعاكس للسهم الموضوع على علامة (دحرج في هذا الاتجاه)

لا بد من فحص الخندق المحفور جيدا حتى لا تكون هناك حجارة ذات اطراف حادة او اساسات او اعمال حديد تسليح وخلافه. التي من الممكن ان تضرر بالكابل ولا بد من استعمال تراب او رمل منخول كوسادة

ان تجهز الخندق قبل تركيب الكابل تشتمل على تركيب الواح الانزلاق والدحرجات ... الخ بالاضافة الى تغطية حبل الرافعة في حالة الاستعانة بالطاقة. ان دحرجات الكابل ضرورية لمنع الكابل من ملامسة الارض. ولا بد من ترك مسافة ٢ متر بعيدا عن حجم الكابل العادي.

ان وضع الدحرجات بصورة صحيحة مهم لتقليل الاحتكاك الى الحد الادنى.

من المستحسن ان يسحب الكابل بصورة مستمرة حتى وضعه النهائي. اذ ربما يستقر الكابل بين الدحرجات عند السحب المنقطع الامر الذي يؤدي الى حدوث ضغط عال على العمال و المكينات عند السحب مرة اخرى بعد التوقف. في حالة السحب يدويا او باستعمال رافعة لا بد من وجود عامل بجوار البكرة ويده لوح من الخشب في شكل اسفيني يوضع مقابل شفة البكرة ليمنع دوران البكرة بصورة اكثر من اللازم في حالة توقف السحب والا حدثت دورات كثيرة غير لازمة للبكرة.

SELCOPLAST CABLES



إرشادات معاملة وتخزين وتركيب كابلات الطاقة

عند السحب باستعمال رافعة ينصح بسحب طرف الكابل يدويا لاطول مسافة ممكنة قبل ربطه بحبل الرافعة وذلك لتمكين دحرجات الكابل الامامية ولوحات الانزلاق وخلافه لتحمل الحمل والاستقرار في وضعية تكون تحت السيطرة الكاملة. على مشغل الرافعة ان ينتبه في كل الاوقات لأجهزة قياس القوة الميكانيكية لمنع الحمولة الزائدة. من المهم جدا توفر وسائل اتصال جيدة في حالة السحب لمسافات طويلة ويفضل استعمال الراديو.

عند استعمال الرافعة الكهربائية للسحب لا بد من الانتباه بصورة اكثر الى اقصى ثقل سحب مسموح به لهذه التمديدات. يجب توصيل "عين سحب" بالموصلات، ويمكن في حالة موصلات النحاس ان تكون قوة شد السحب 6 كيلوجرام لكل متر مربع لاجمالي منطقة الموصل (بشرط ان يكون الحد الاقصى للقوة 2000 كيلوجرام)

لا بد من استعمال معجون الجرانيت للتشحيم عند سحب الكابل الى داخل القناة.

يمكن استعمال كابل (بجورب) للتمديدات في الخنادق المفتوحة او التمديدات المستقيمة. وفي كل الاحوال، ينصح بحماية الـ "بي في سي" المغلف بطبقة من شريط البيتومين بنسبة 5% من التداخل.

يجب الا تثني الكابلات في لفات ذات اقطار صغيرة. فيقدر ما كان قطر اللفة كبيرا كان افضل. ويجب الا يقل قطر اللفة تحت أي ظرف عن الحدود الدنيا المسموح بها. ومن المهم جدا ان تكون اللفة ذات قطر كبير اذا كانت الكابلات ستسحب باستعمال رافعة كهربائية وذلك للاحتفاظ بالحد الاقصى من شدة السحب المسموح به ولتجنب تمدد الكابل في المنحنيات او في داخل القنوات.

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٣.٣ الوضع النهائي للكابل :

يتم قبل فصل الكابل عن حبل السحب وضع الكابل. يؤخذ الكابل من احد طرفيه ويحذر برفع من الدحرجات ويوضع في اسفل الخندق. لا بد من رفع حوالي ١٠ امتار من الكابل في وقت واحد مع دفع أي ارتخاء الى الامام.

قد يتطلب الطرف النهائي مناولة ثنائية، إذ لا يمكن سحب الكابلات الى داخل المباني بصورة مباشرة. في هذه الحالة يتم سحب الكابل بصورة اكبر ويقوم عامل بعده الى الموضع المطلوب. لا بد ان يكون الالتفاف كبيرا بقدر الامكان في جميع الاوقات حتى يكون قطر الانثناء اكبر من الحد الأدنى المسموح به في كل الاوقات.

وينفس الكيفية يمكن عند مواقع البكرات تفكيك الطول المطلوب من الكابل ووضعه جانبا على الشكل 8، اذا كانت المساحة محدودة، قبل قطع الطول المطلوب ووضعه في المكان المطلوب. بعد القطع مباشرة لا بد من لحام اطراف الكابل بصورة مناسبة لمنع دخول الرطوبة. وفي هذا الخصوص لا بد من فحص لحام طرف السحب بعناية للتأكد من انه لم يتضرر اثناء التمديد. (انظر الشكل ١٥،١٤)

٤.٣ اعادة الردم اعادة البناء

قبل اعادة الردم من الضروري القيام بفحص نظري و البنود التي تحتاج للفحص هي :

١.٤.٣ لا بد للكابل من وسادة مناسبة من رمل او تربة منخولة و لا بد من ازالة قطع الحجارة وبقية الاشياء ذات الاطراف الحادة من من مجرى الكابل.

٢.٤.٣ لا بد من ان تكون المساحة صحيحة اذا كان هناك كابل واحد في الخندق.

٣.٤.٣ ازالة جميع معدات السحب بعناية.

٤.٤.٣ خلو الكابل من الاضرار الواضحة التي قد تكون حدثت اثناء التمديد. وقد يحدث قدر كبير من تعطل الكابل في الخدمة بسبب مثل هذه الاضرار وقد يكون من الضروري فحص اسفل الكابل باستعمال مرآة. وفي هذه الحالات ينصح القيام بالفحص بينما لا يزال الكابل على البكرات.

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٥.٤.٣ من الضروري ان يتم اصلاح أي ضرر في الكابل المقوى قبل مباشرة الردم. و لابد من العناية الفائقة بالتفاصيل اثناء القيام بالاصلاحات ويجب استعمال المواد المجازة و المحددة فقط. حسبما تكون الحالة يمكن استعمال القفازات التي تنكش بالحرارة او الطرق المذكورة في دليل كابلات بي أي سي سي، صفحة ٤٢٧ للقيام بالاصلاحات.

٥.٣ الردم

او لا لابد من احاطة الكابل و تغطيته بمادة وسادة مناسبة باستعمال الرمل او التربة المنخولة حسب الحاجة للحصول على غطاء محكم فوق الكابل. بعد ذلك يمكن وضع بلاط غطاء او شريط بلاستيكي معلم فوق الكابل في الوسط.

لا بد من عمل طبقة الردم الاولى وتدمج يدويا حتى سماكة ١٥٠ ملم فوق البلاط. توضع المواد اللاحقة وتدمج باستعمال المعدات الميكانيكية.

SELCOPLAST CABLES



الملحق (١)

معاملة بكرة الكابل الكهربائي

(١) دحرجة البكرات

لا بد من دحرجة البكرات في الاتجاه الموضح بالسهم الموضوع على الشفة. ويجب ان تكون الدحرجة في كل الحالات.

(ب) تدوير البكرات

ان افضل طريقة لتدوير بكرة الكابل هي الدحرجة على طابقين غير سميكين تم تشحيمهما جيدا او الواح مساحتها ٢ قدم مربع. بعد ذلك تستعمل الابطاق كطاوله دوارة وسوف تدور البكرة الى الاتجاه المطلوب.

تعتبر عملية استعمال قضيب الحديد الذي يوضع اسفل المسمار الرئيسي خطرة جدا على المشغل و ضارة جدا على البكرة.

(ج) انزال ورفع البكرات

عند تحريك البكرات من مستوى الى آخر على سهيل المثال من الشاحنة الى الارض او من الرصيف الى الباخرة ... الخ لا بد من استعمال تروس الرفع والانزال. عند رفع البكرات من طبقة عليا في طبقات مرصوصة. لا بد من الانتباه حتى لا تتحرك الطبقة السفلى فنتسبب في انهيار البكرات.

ان البكرات سواء كانت معبأة او فارغة ثقيلة جدا ولا يمكن تسليمها يدويا. عليه لا بد من تعليقها ويجب الا يتم اسقاطها (انظر الشكل ١ و ٢)

عند رفع بكرات الكابلات للتحميل او التنزيل، يجب دائما استعمال عمود الدوران مع حمالات الرافعة وسلسلة (بروزر) او اذرع الرفع. يجب الا يتم رفع البكرة باية وسيلة اخرى تحت أي ظرف كان، مثلا باستعمال الخطاف المظلي او الاذرع السلكية ... الخ (انظر الشكل ١)

عند رفع بكرة كابل تزن اكثر من ٢ طن، لا بد من استعمال اذرع الرفع او الحمالات بين الحمالات او السلسلة (بروزر) لمنع تفتت الشفة في الكابل كما هو معروض (انظر الشكل ١)

ملحوظة : يجب ان يكون الخطاف او الحمالات قريبا من شفة البكرة.

SELCOPLAST CABLES



الملحق (٢)

التعامل مع الكابل وإرشادات التمديدات

(أ) الالتزام باللوائح :

لا بد من تمديد الكابلات وفقا لاي قانون وطني مطبق، مثلا الاصدار السادس عشر لـ أي ئي ئي لوائح التوصيلات الكهربائية لـ المملكة المتحدة

(ب) مواقع التمديدات :

يمكن استعمال الكابلات داخلها او خارجها الا ان هنالك بعض التحفظات الضرورية المتعلقة بالكابلات التي تدفن تحت الارض مباشرة فعثلا لا يفضل تمديد الكابل في ظروف البلل او البيئة غير المناسبة، يجب الا تتعرض الاطراف المفتوحة للكابل غير المحمي للرطوبة قبل التركيب النهائي لوصلة أو نهاية الكابل.

يجب الا يتعرض الكابل لاثار مواد كيميائية مؤذية او ضارة عند التمديد او بعده . مثلا يجب الا يتم تمديد الكابل حيث يكون هنالك خطر تلوث محتمل بسبب تدفق هايدروكربون او كيميائي .

عند تمديد الكابل في بيئة قد توجد فيها اشعة فوق البنفسجية لا بد من حساب اثار هذه الاشعاعات على المادة المقوية للكابل . يوصي بحماية الكابل من اشعة الشمس المباشرة .

(ج) ادنى قطر للتمديدات :

يجب عدم ثني الكابل عند التمديد لقطر داخلي اقل من الموصى به لنوع الكابل من قبل المصنع

(د) المسافات بين داعمات الكابل :

يرجى الرجوع لكاتالوجات منتجات الكابلات بخصوص المسافات بين داعمات الكابل .

(هـ) التعبئة والتسليم :

من الواضح انه في بعض الحالات قد تكون عبوة الكابلات، مثلا بكرات كبيرة وثقيلة او اطراف حادة لمكونات الكابل، خطرة على السلامة عندها لا بد للافراد من ان يأخذوا الحذر اللازم للسلامة عند تسليم هذه البندود . ان الحديد اللولبي لشريط الربط او الخطر الناجم عن المسامير المستعملة في تثبيت الالواح حول البكرات او الحاويات هي امثلة محددة نلقت الانتباه اليها .

SELCOPLAST CABLES



الملحق (٣)

إصلاح تقوية الـ بي في سي

عند تفريغ بكرة الكابل أو إعادة لف الكابل أو تمديده قد يحدث ضرر عفوي. فإذا ظهر ان الكابل أسفل التلف في حالة جيدة يمكن القيام بأصلاح الضرر المحدد في الموقع كما يتم اقتراحه بالطرق البديلة التالية : ان الهدف هو منع امكانية دخول الرطوبة خلال منطقة الضرر الى التسليح او بقية اجزاء الكابل وهو في مرحلة التمديد الاخيرة .

من المهم جدا اصلاح أي ضرر يلاحظ على التقوية بعد التمديد قبل مباشرة الردم .

لا بد من التقيد الشديد بالتفاصيل عند القيام بالاصلاحات ويجب استعمال المواد المجازة و المحددة فقط. لقد تم وضع توجيهات عامة مختصرة ادناه في حالة الشك. يجب النظر في توصية مصنع الكابل. ان بعض الطرق المذكورة مناسبة للاستعمال فقط بعد ان يكتمل التمديد عندما يكون الكابل غير معرض لاية حركة ذات اهمية .

(أ) الاضرار السطحية :

يتم مسح منطقة التضرر الموضعي بشريط كاربورندوم الى عمق الضرر ويتم تشكيل قطع مائل لطول ٢٥ ملم عند الاطراف بعد التنظيف بمحلول مناسب * . يتم وضع شريط بلاستيكي لاصق تلقائيا بعرض ٢٥ ملم. ويتداخل ٥٠٪ ويستمر اللف اعلى القطع حتى الوصول الى القمة ثم توضع بعد ذلك اربعة طبقات اخرى بطول ٧٥ ملم خلف القطع .

(ب) الفتحات او الشقوق في المقوى البلاستيكي :

يتم قطع اطراف الفتحات او الشقوق الى مسافة ٣٠ ملم. تكحت المنطقة المحيطة بطول يزيد على ٢٠ ملم وبعد ذلك تنظف بمحلول مناسب. اذا كان البيتومين ما يزال موجودا يجب ازالته من المنطقة التي تم اعدادها. ثم توضع رقعة لملء المنطقة باستعمال معجون خاص "بيكاسيل" ثم يتبع هذا بطبقة فوقية عرضها ٥٠ ملم من شريط يمتد ٥٠ ملمترا من الرقعة وثلاثة لغات من طبقات بلاستيكية لاصقة ذاتها تمتد ١٠٠ ملم من طرف شريط الـ بي أي بي. في حالة الشقوق يتم عمل تقوية اضافية باضافة رباط راتنج ايبوكسي اذا كان من المحتمل تحريك الكابل .

SELCOPLAST CABLES



تابع الملحق (٣)

إصلاح تقوية الـ بي في سي

ج) ازالة حلقة مقوى كاملة :

بعد ازالة الحلقة المتضررة يتم عمل قطع مائل وبعد ذلك يتم تنظيف السطح جيدا باستعمال محلول* ، مع ضرورة ازالة طبقة الجرافيت اذا كانت موجودة ثم توضع بعد ذلك اربعة طبقات فوقية من شريط بلاستيكي لاصق ذاتيا ٥٠ ملمتر عرض بي أي بي مشدودة جدا تمتد الى ٥٠ ملم خلف القطع الاصلي. ثم يوضع بعد ذلك شريط بلاستيكي لاصق ذاتيا بثلاث لفة يرتفع الى المستوى المناسب لقطر المقوى الاصلي. يجب ان يكون الطول حتى نهاية القطع .

توضع بعد ذلك خمس طبقات من شريط بلاستيكي لاصق ذاتيا تمتد كل واحدة لمسافة ٥ ملم اخرى على طول الكابل. ينتهي الاصلاح بتقوية من "كمادة راتنج" تتكون من ٦ طبقات من شريط شاش او رباط مشبع براتنج ابوكسي مخلوط حديثا من درجة مجازة. ويحتاج هذا لحوالي ١٢ ساعة ليجف .

د) الاصلاح بخراطيم تنكمش بفعل الحرارة :

يمكن استعمال الخراطيم التي تنكمش بفعل الحرارة بصورة مريحة لاصلاح مقوى الكابل المتضرر. توضع حيثما كان ممكنا خراطيم لتنكمش بالكامل على طول الكابل حتى نقطة تضرر المقوى، ولكن اذا كان من الصعب الوصول الى اطراف الكابل يستعمل خرطوم به سحاب .

يتم اعداد و تنظيف الموقع كما هو اعلاه اعتمادا على طبيعة الضرر ويتم وضع المعجون الخاص " بيكاسيل" لتغطية فتحة المقوى وبعد ذلك يوضع الخرطوم القابل للانكماش في المنتصف فوق نقطة الضرر ويتم تسخين المنطقة المحيطة بطريقة منتظمة باستعمال لهب غاز او هواء ساخن حسب توصية مورد الخرطوم. من الضروري ان يتم التسخين بصورة متساوية ومناسبة لضمان اغلاق محكم يمنع تسرب المياه .

* جينكلين (أي سي أي) مناسب لهذه الاستعمالات .

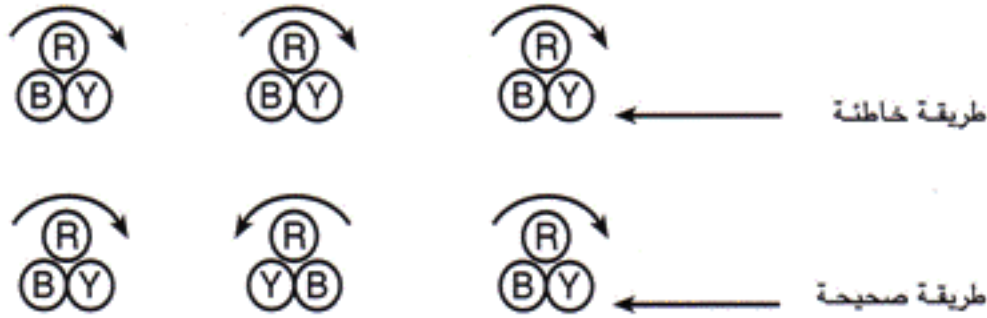
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الملحق (٤)

تمديد كابل أوحادي الوجه

(١) كابل أوحادي الوجه

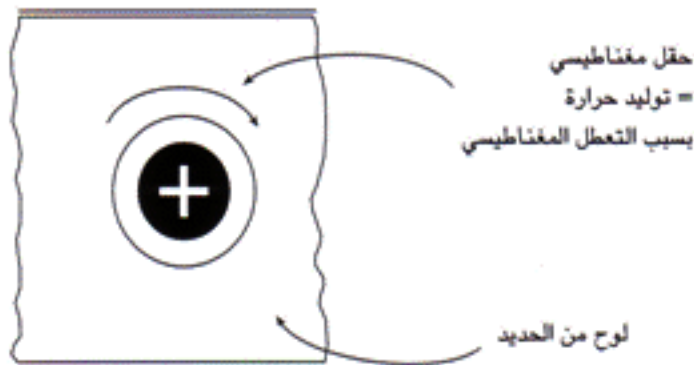


طريقة خاطئة : تقسيم متساو للحمل

(٢) كابلات مسلحة أوحادية الوجه

- (أ) إذا كانت مربوطة في الطرفين فإن الكابل المسلح يحمل تيارا دائريا.
- (ب) يبطل جهاز المهابنة المعزول (جزء من مركبات بي أي سي سي تصميم رقم ٤٨٩ - اية اية) المستعمل مع جلبة الكابل المسلح الدائر.
- (ج) إذا لم يكن مربوطة في الطرفين يكون الطرف الخالي من التأريض فولت مستحث .
- (د) لابد ان يكون درع الكابل أوحادي الوجه في انظمة التكييف من الحديد ثنائي التكافوء .

(٣) تأثير التسخين على كابلات انظمة التكييف أوحادية الوجه عندما تكون محاطة بالحديد .

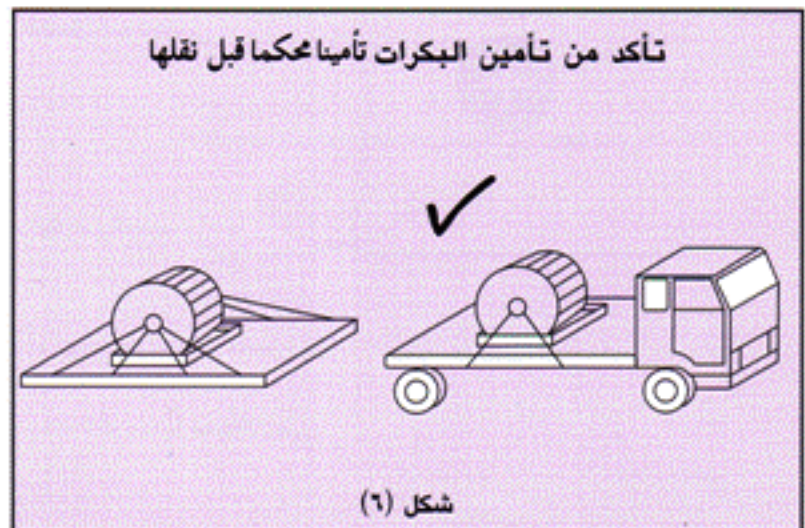
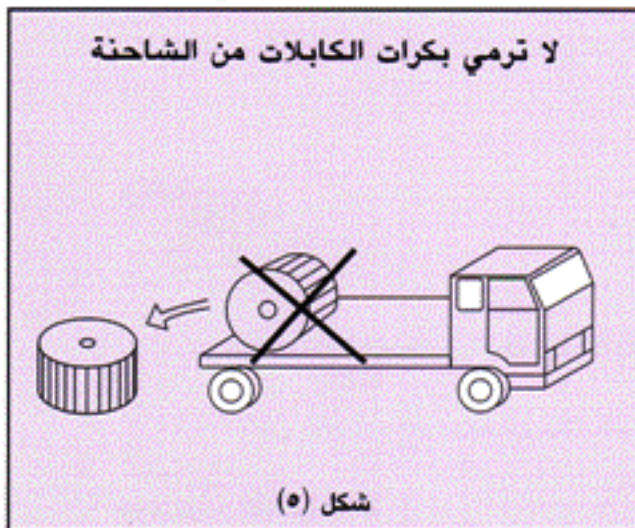
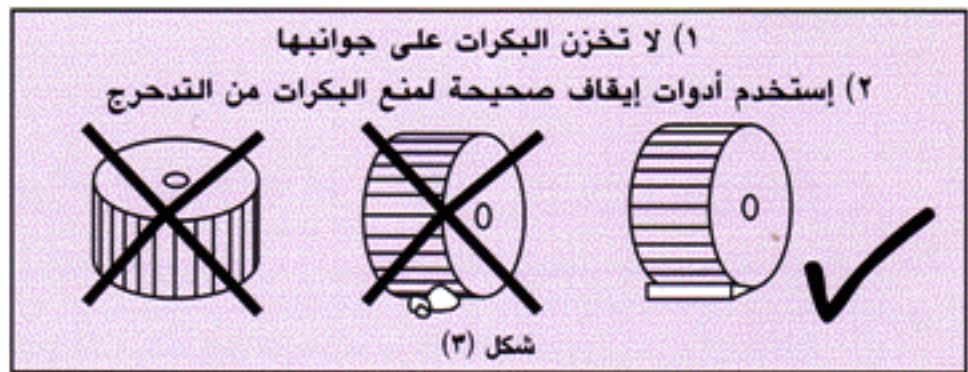
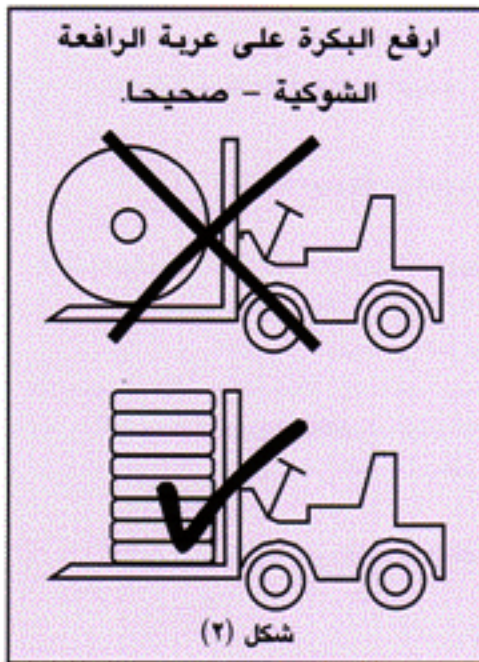
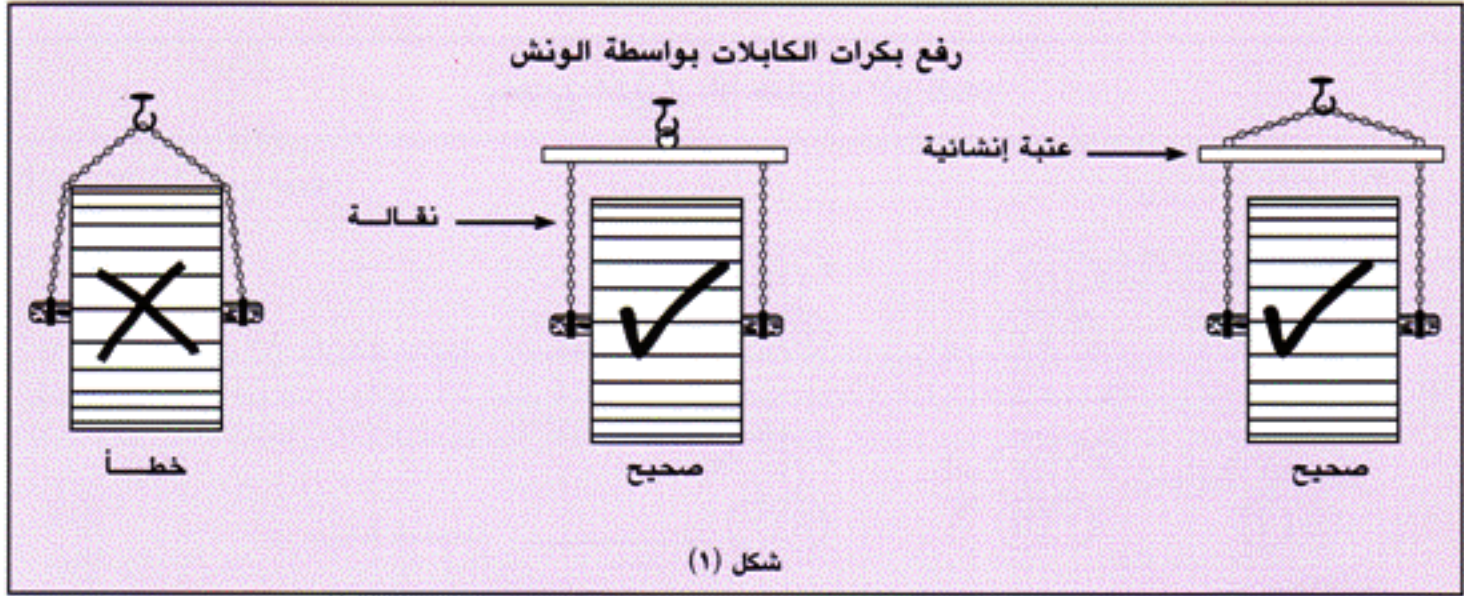


- استعمل : مادة ليست من الحديد مثل الألومنيوم او الواح غير معدنية مسموح بها .

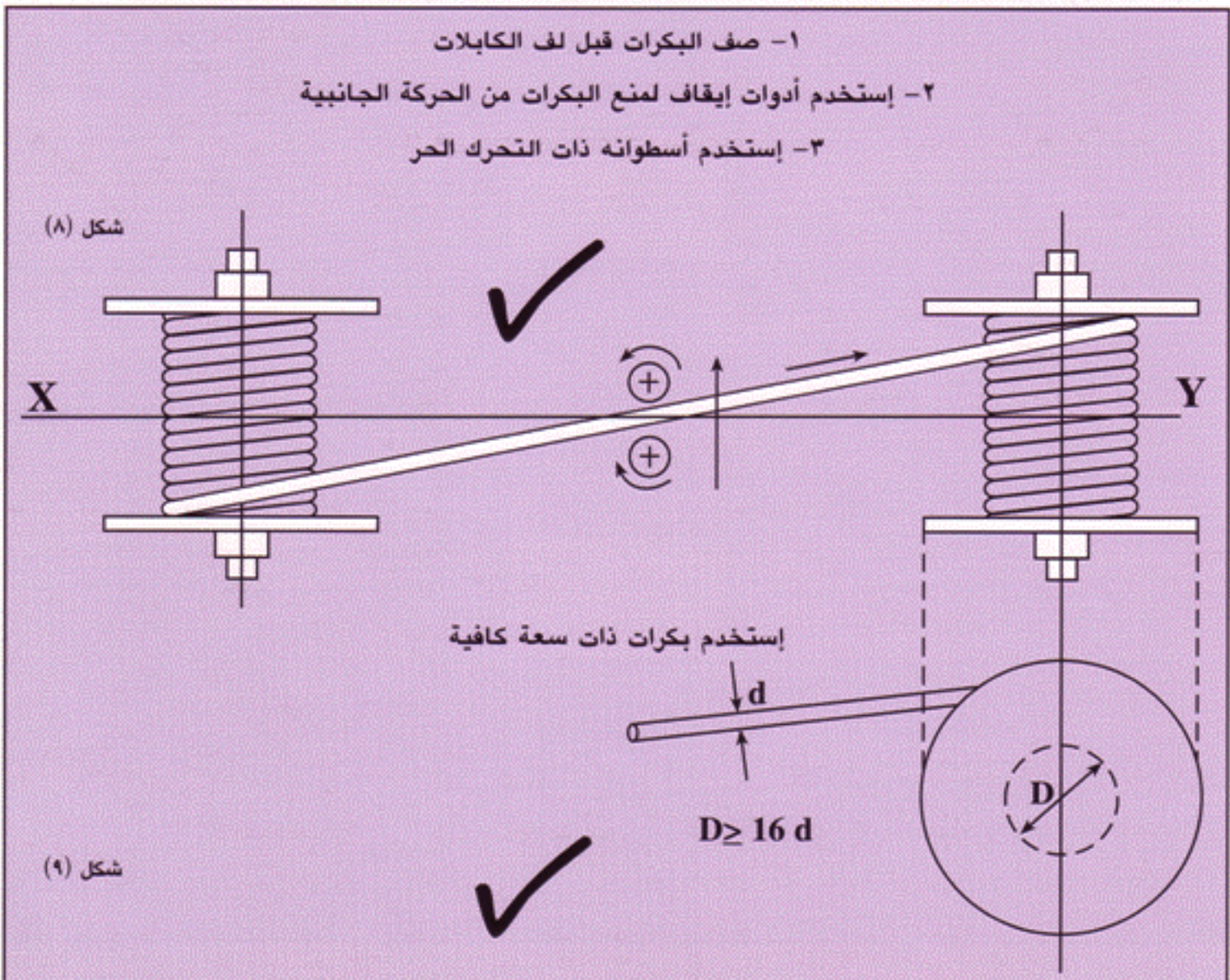
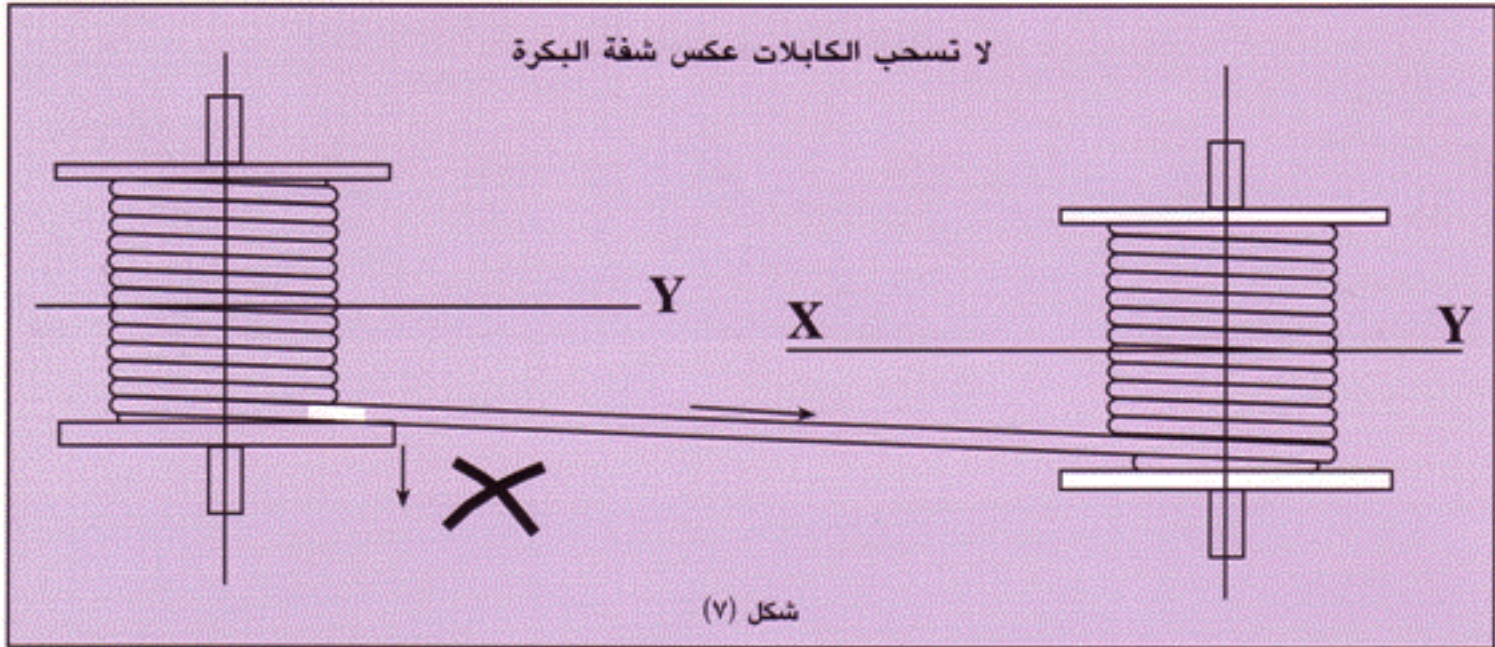
- لا تمرر كابل أوحادي الوجه من خلال مجرى الاسلاك الكهربائية تحت الارض .

حسب الرسم البياني المقدم .

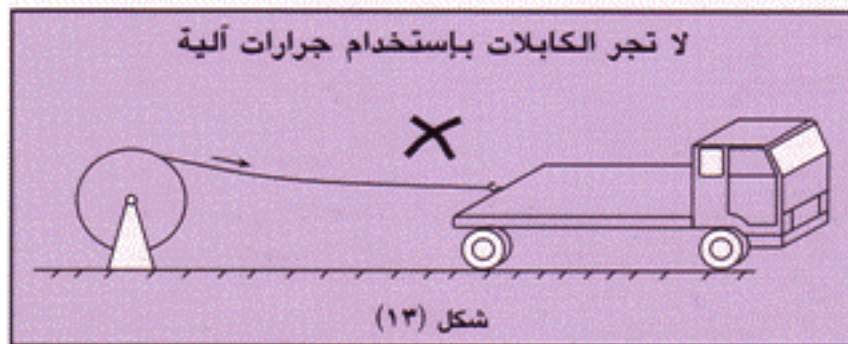
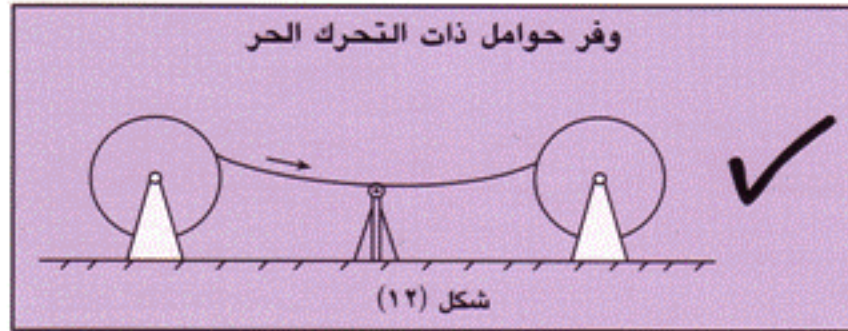
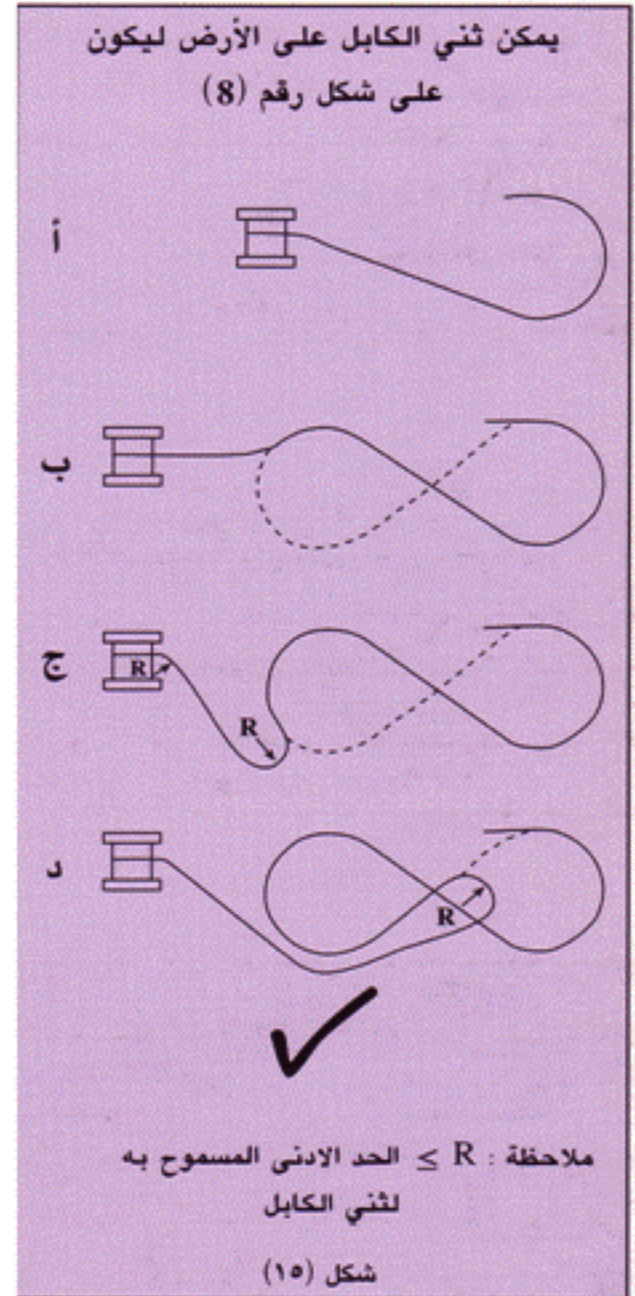
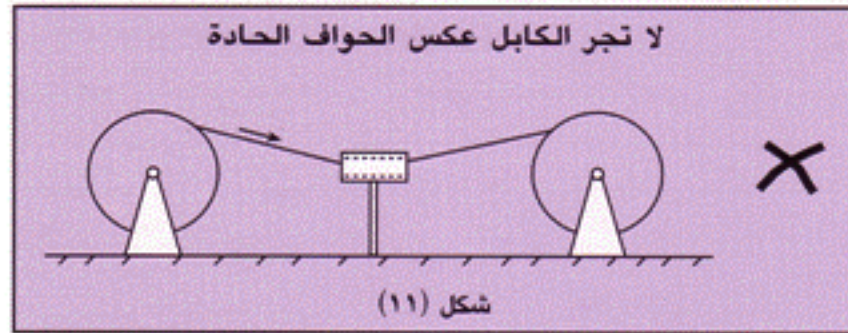
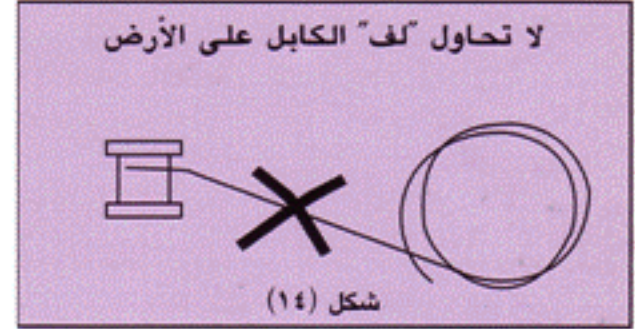
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سالكوپلاست الكابلات (ش.م.م.م.)