BUILDING WIRES & LOW VOLTAGE CABLES

Prysmian Group

PRYSMIAN

Draka

LINKING THE FUTURE

LINKING ENERGY AND INFORMATION TO GLOBAL GROWTH

Prysmian Group is the world leader in the energy and telecom cables and systems industry.

With over **130 years experience** and a presence in more than 50 countries around the world, and with 20,000 people and 91 plants, the Group is strongly positioned at the high-tech end of the energy and telecom cable sectors.

The Group was created through the **union of Prysmian and Draka**, already leaders in their markets for innovation and technological know-how. We are combining the strengths of both and achieving increased investment potential and geographical coverage, as well as offering the most extensive range of products, services, technologies and know-how available on the market.

Prysmian Group is also characterised by being a **public company**, a listed company without a controlling shareholder, managed on a transparent basis and leveraging its ability to gain and maintain the continued confidence of its investors

KEEPING CUSTOMERS AS OUR FOCUS

In the **energy sector**, Prysmian Group operates in the business of submarine and underground power transmission cables and systems, special cables for applications in many different industrial sectors, and medium and low-voltage cables for the construction and infrastructure industry.

In the **telecom sector**, the Group manufactures cables and accessories for the voice, video and data transmission industry, offering a complete range of optical fibres, optical and copper cables, and connectivity systems.

The Group has established **strong relationships with the major global players** in each of the industries in which it operates, often delivering projects designed to specific customer requirements. **Customer centricity**, defined as the ability to anticipate and quickly meet customer needs, is a hallmark of the Group's activities and is reflected in its constant presence, from product design through to delivery, and provision of a level of service in line with customer expectations which are constantly monitored using specific, agreed parameters. Prysmian Group is able to develop solutions that not only meet specific standards but also satisfy precise **customer requirements**. This is achieved by having a fast, smooth organisation throughout the supply chain, capable of speeding-up decision-making and time to market by adapting itself to the demands of the various industries and continuously investing in innovation.The Group is always raising the bar, with the aim of being a benchmark in terms of quality of service, speed and flexibility.

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SECTION 1 :
BUILDING WIRES
(TIS 11-2553 STANDARD)

CE EXTENDED PRODUCT OFFER

WORLDWIDE LEA

SUPPORTING GLOBAL UTILITIES IN THE

OF SMARTER AND GREENER POWER GR

STRONGER PLATFORI

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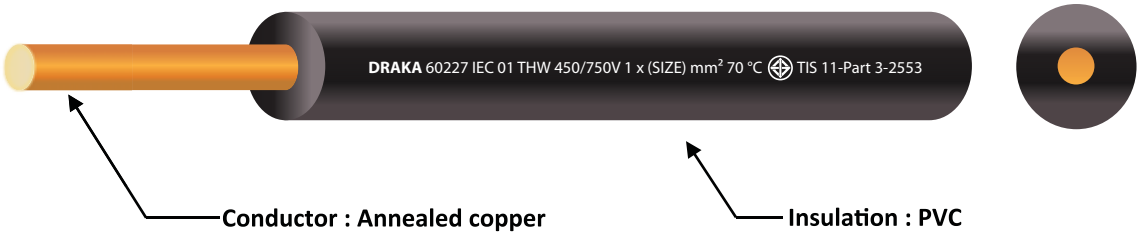
60227 IEC 01 THW

450/750V 70°C PVC INSULATED, SINGLE CORE



Application : Building wiring for installation on insulator or in raceway, dry and wet location

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 : Part 3, Table 1

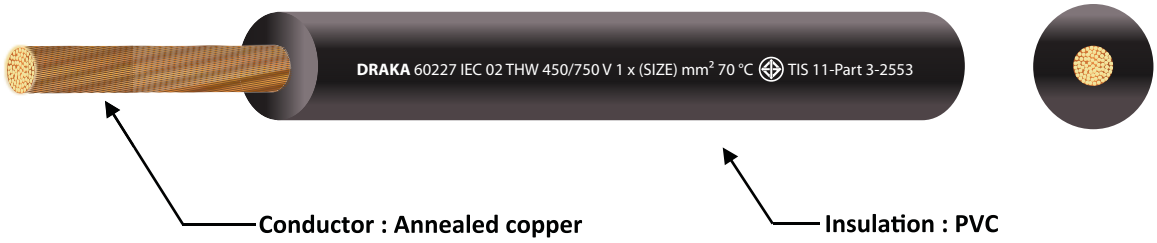
Construction : Conductor : Solid or Stranded annealed copper, size 1.5 - 400 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
1.5	1/1.38	0.7	2.6	3.2	0.0110	21	100/C
1.5	7/0.53	0.7	2.7	3.3	0.0100	22	100/C
2.5	1/1.78	0.8	3.2	3.9	0.0100	33	100/C
2.5	7/0.67	0.8	3.3	4.0	0.0090	35	100/C
4	1/2.25	0.8	3.6	4.4	0.0085	48	100/C
4	7/0.85	0.8	3.8	4.6	0.0077	51	100/C
6	1/2.74	0.8	4.1	5.0	0.0070	67	100/C
6	7/1.04	0.8	4.3	5.2	0.0065	72	100/C
10	1/3.56	1.0	5.3	6.4	0.0070	112	1000/D
10	7/1.35	1.0	5.6	6.7	0.0065	120	1000/D
16	7/1.70	1.0	6.4	7.8	0.0050	181	1000/D
25	7/2.14	1.2	8.1	9.7	0.0050	284	1000/D
35	19/1.53	1.2	9.0	10.9	0.0043	381	1000/D
50	19/1.78	1.4	10.6	12.8	0.0043	516	1000/D
70	19/2.14	1.4	12.1	14.6	0.0035	726	1000/D
95	19/2.52	1.6	14.1	17.1	0.0035	1002	1000/D
120	37/2.03	1.6	15.6	18.8	0.0032	1253	1000/D
150	37/2.25	1.8	17.3	20.9	0.0032	1541	1000/D
185	37/2.52	2.0	19.3	23.3	0.0032	1931	1000/D
240	61/2.25	2.2	22.0	26.6	0.0032	2517	1000/D
300	61/2.52	2.4	24.5	29.6	0.0030	3148	500/D
400	61/2.85	2.6	27.5	33.2	0.0028	4008	500/D

C : Packing in coil.
D : Packing in drum.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 02 THW

450/750V 70°C PVC INSULATED FLEXIBLE CONDUCTOR, SINGLE CORE



Application : For making cross connection between terminal inside appliances, instruments or apparatus

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 : Part 3, Table 3

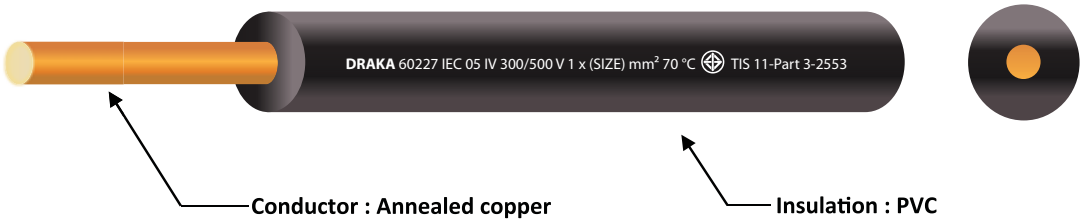
Construction : Conductor : Flexible annealed copper, size 1.5 - 240 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
1.5	30/0.25	0.7	2.8	3.4	0.0100	22	100/C
2.5	50/0.25	0.8	3.4	4.1	0.0090	34	100/C
4	56/0.30	0.8	3.9	4.8	0.0070	50	100/C
6	84/0.30	0.8	4.4	5.3	0.0060	71	100/C
10	80/0.40	1.0	5.7	6.8	0.0056	118	1000/D
16	126/0.40	1.0	6.7	8.1	0.0046	176	1000/D
25	196/0.40	1.2	8.4	10.2	0.0044	276	1000/D
35	276/0.40	1.2	9.7	11.7	0.0038	376	1000/D
50	396/0.40	1.4	11.5	13.9	0.0037	538	1000/D
70	360/0.50	1.4	13.2	16.0	0.0032	742	1000/D
95	475/0.50	1.6	15.1	18.2	0.0032	977	1000/D
120	608/0.50	1.6	16.7	20.2	0.0029	1230	1000/D
150	756/0.50	1.8	18.6	22.5	0.0029	1533	1000/D
185	925/0.50	2.0	20.6	24.9	0.0029	1874	1000/D
240	1221/0.50	2.2	23.5	28.4	0.0028	2459	1000/D

C : Packing in coil.
D : Packing in drum.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 05 IV

300/500V 70°C PVC INSULATED SOLID CONDUCTOR, SINGLE CORE



Application : Building wiring for installation on insulator or in raceway, dry and wet location

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 3, Table 5

Construction : Conductor : Solid annealed copper, size 0.5 - 1 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
0.5	1/0.80	0.6	1.9	2.3	0.015	8.5	100/C
0.75	1/1.00	0.6	2.1	2.5	0.012	11	100/C
1	1/1.18	0.6	2.2	2.7	0.011	14	100/C

C : Packing in coil.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 06 IV

300/500V 70°C PVC INSULATED FLEXIBLE CONDUCTOR, SINGLE CORE

Conductor : Annealed copper

Insulation : PVC

Application : For making cross connection between terminal inside appliances, instruments or apparatus

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 3, Table 7

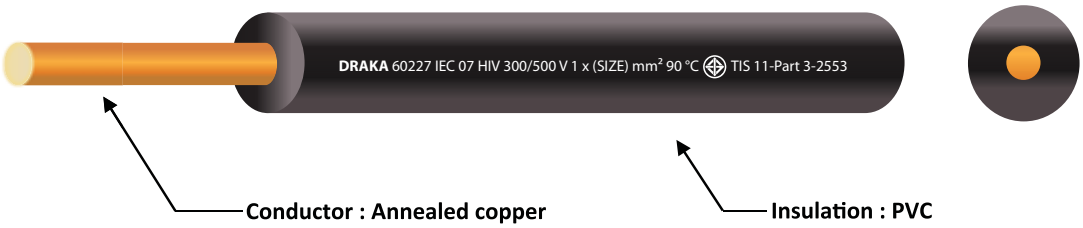
Construction : Conductor : Flexible annealed copper, size 0.5 - 1 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
0.5	16/0.2	0.6	2.1	2.5	0.013	12	100/C
0.75	24/0.2	0.6	2.2	2.7	0.011	15	100/C
1	32/0.2	0.6	2.4	2.8	0.010	18	100/C

C : Packing in coil.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 07 HIV

300/500V 90°C PVC INSULATED SOLID CONDUCTOR, SINGLE CORE



Application : Building wiring for installation on insulator or in raceway, dry and wet location

Classification : Maximum conductor temperature 90°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 3, Table 9

Construction : Conductor : Solid annealed copper, size 0.5 - 2.5 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
0.5	1/0.80	0.6	1.9	2.3	0.015	8	100/C
0.75	1/1.00	0.6	2.1	2.5	0.013	11	100/C
1	1/1.13	0.6	2.2	2.7	0.012	13	100/C
1.5	1/1.38	0.7	2.6	3.2	0.011	20	100/C
2.5	1/1.78	0.8	3.2	3.9	0.009	31	100/C

C : Packing in coil.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 08 HIV

300/500V 90°C PVC INSULATED FLEXIBLE CONDUCTOR, SINGLE CORE

Application : Building wiring for installation on insulator or in raceway, dry and wet location

Classification : Maximum conductor temperature 90°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 3, Table 11

Construction : Conductor : Flexible annealed copper, size 0.5 - 2.5 mm²
Insulation : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
			Min	Max			
0.5	16/0.2	0.6	2.1	2.5	0.013	12	100/C
0.75	24/0.2	0.6	2.2	2.7	0.012	15	100/C
1	32/0.2	0.6	2.4	2.8	0.010	18	100/C
1.5	30/0.25	0.7	2.8	3.4	0.009	23	100/C
2.5	50/0.25	0.8	3.4	4.1	0.009	33	100/C

C : Packing in coil.
Colour : Blue, Brown, Black, Grey, White, Red, Green, Yellow, Green/Yellow or upon customer request

60227 IEC 10 NYY

300/500V 70°C PVC INSULATED AND SHEATHED, TWO CORES

Application : For installation exposed, or in raceway, wet or dry location.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 4, Table 1

Construction : Conductor : Solid or Stranded annealed copper, size 1.5 - 35 mm²

Insulation : Polyvinylchloride (PVC)

Sheath : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Min	Max			
1.5	1/1.38	0.7	0.4	1.2	7.6	10.0	0.0110	118	1000/D
1.5	7/0.53	0.7	0.4	1.2	7.8	10.5	0.0100	128	1000/D
2.5	1/1.78	0.8	0.4	1.2	8.6	11.5	0.0100	160	1000/D
2.5	7/0.67	0.8	0.4	1.2	9.0	12.0	0.0090	172	1000/D
4	1/2.25	0.8	0.4	1.2	9.6	12.5	0.0085	207	1000/D
4	7/0.85	0.8	0.4	1.2	10.0	13.0	0.0077	223	1000/D
6	1/2.74	0.8	0.4	1.2	10.5	13.5	0.0070	263	1000/D
6	7/1.04	0.8	0.4	1.2	11.0	14.0	0.0065	287	1000/D
10	1/3.56	1.0	0.6	1.4	13.0	16.5	0.0070	431	1000/D
10	7/1.35	1.0	0.6	1.4	13.5	17.5	0.0065	469	1000/D
16	7/1.70	1.0	0.6	1.4	15.5	20.0	0.0052	647	1000/D
25	7/2.14	1.2	0.8	1.4	18.5	24.0	0.0050	976	1000/D
35	19/1.53	1.2	1.0	1.6	21.0	27.5	0.0044	1299	1000/D

D : Packing in drum.

Core Colour :

- Option 1 : Blue, Brown
- Option 2 : Upon customer request

60227 IEC 10 NYY

300/500V 70°C PVC INSULATED AND SHEATHED, THREE CORES

Application : For installation exposed, or in raceway, wet or dry location.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 4, Table 1

Construction : Conductor : Solid or Stranded annealed copper, size 1.5 - 35 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Min	Max			
1.5	1/1.38	0.7	0.4	1.2	8.0	10.5	0.0110	137	1000/D
1.5	7/0.53	0.7	0.4	1.2	8.2	11.0	0.0100	147	1000/D
2.5	1/1.78	0.8	0.4	1.2	9.2	12.0	0.0100	190	1000/D
2.5	7/0.67	0.8	0.4	1.2	9.4	12.5	0.0090	200	1000/D
4	1/2.25	0.8	0.4	1.2	10.0	13.0	0.0085	251	1000/D
4	7/0.85	0.8	0.4	1.2	10.5	13.5	0.0077	264	1000/D
6	1/2.74	0.8	0.4	1.4	11.5	14.5	0.0070	325	1000/D
6	7/1.04	0.8	0.4	1.4	12.0	15.5	0.0065	355	1000/D
10	1/3.56	1.0	0.6	1.4	14.0	17.5	0.0070	534	1000/D
10	7/1.35	1.0	0.6	1.4	14.5	19.0	0.0065	583	1000/D
16	7/1.70	1.0	0.8	1.4	16.5	21.5	0.0052	819	1000/D
25	7/2.14	1.2	0.8	1.6	20.5	26.0	0.0050	1244	1000/D
35	19/1.53	1.2	1.0	1.6	22.0	29.0	0.0044	1657	1000/D

D : Packing in drum.
Core Colour :
- Option 1 : Green/Yellow, Blue, Brown
- Option 2 : Brown, Black, Grey
- Option 3 : Upon customer request

60227 IEC 10 NYY

300/500V 70°C PVC INSULATED AND SHEATHED, FOUR CORES

Application : For installation exposed, or in raceway, wet or dry location.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 4, Table 1

Construction : Conductor : Solid or Stranded annealed copper, size 1.5 - 35 mm²

Insulation : Polyvinylchloride (PVC)

Sheath : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Min	Max			
1.5	1/1.38	0.7	0.4	1.2	8.6	11.5	0.0110	166	1000/D
1.5	7/0.53	0.7	0.4	1.2	9.0	12.0	0.0100	178	1000/D
2.5	1/1.78	0.8	0.4	1.2	10.0	13.0	0.0100	233	1000/D
2.5	7/0.67	0.8	0.4	1.2	10.0	13.5	0.0090	244	1000/D
4	1/2.25	0.8	0.4	1.4	11.5	14.5	0.0085	323	1000/D
4	7/0.85	0.8	0.4	1.4	12.0	15.0	0.0077	337	1000/D
6	1/2.74	0.8	0.6	1.4	12.5	16.0	0.0070	433	1000/D
6	7/1.04	0.8	0.6	1.4	13.0	17.0	0.0065	472	1000/D
10	1/3.56	1.0	0.6	1.4	15.5	19.0	0.0070	668	1000/D
10	7/1.35	1.0	0.6	1.4	16.0	20.5	0.0065	728	1000/D
16	7/1.70	1.0	0.8	1.4	18.0	23.5	0.0052	1069	1000/D
25	7/2.14	1.2	1.0	1.6	22.5	28.5	0.0050	1649	1000/D
35	19/1.53	1.2	1.0	1.6	24.5	32.5	0.0044	2144	1000/D

D : Packing in drum.

Core Colour :

- Option 1 : Green/Yellow, Black, Brown, Grey
- Option 2 : Blue, Brown, Black, Grey
- Option 3 : Upon customer request

60227 IEC 10 NYY

300/500V 70°C PVC INSULATED AND SHEATHED, FIVE CORES

Application : For installation exposed, or in raceway, wet or dry location.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 : Part 4, Table 1

Construction : Conductor : Solid or Stranded annealed copper, size 1.5 - 35 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Min	Max			
1.5	1/1.38	0.7	0.4	1.2	9.4	12.0	0.0110	201	1000/D
1.5	7/0.53	0.7	0.4	1.2	9.8	12.5	0.0100	221	1000/D
2.5	1/1.78	0.8	0.4	1.2	11.0	14.0	0.0100	284	1000/D
2.5	7/0.67	0.8	0.4	1.2	11.0	14.5	0.0090	306	1000/D
4	1/2.25	0.8	0.6	1.4	12.5	16.0	0.0085	407	1000/D
4	7/0.85	0.8	0.6	1.4	13.0	17.0	0.0077	441	1000/D
6	1/2.74	0.8	0.6	1.4	13.5	17.5	0.0070	530	1000/D
6	7/1.04	0.8	0.6	1.4	14.5	18.5	0.0065	574	1000/D
10	1/3.56	1.0	0.6	1.4	17.0	21.0	0.0070	572	1000/D
10	7/1.35	1.0	0.6	1.4	17.5	22.0	0.0065	890	1000/D
16	7/1.70	1.0	0.8	1.6	20.5	26.0	0.0052	1309	1000/D
25	7/2.14	1.2	1.0	1.6	24.5	31.5	0.0050	1986	1000/D
35	19/1.53	1.2	1.2	1.6	27.0	35.0	0.0044	2617	1000/D

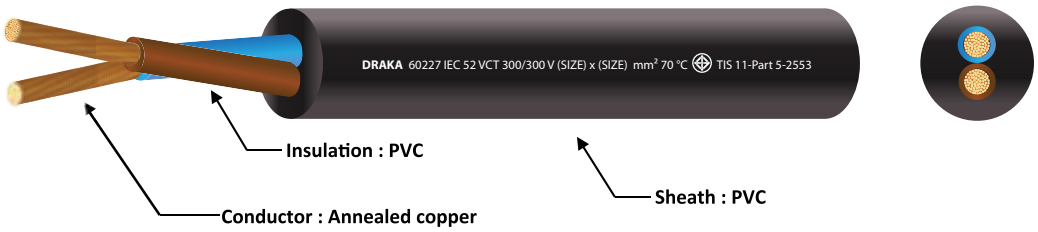
D : Packing in drum.

Core Colour :

- Option 1 : Green/Yellow, Blue, Brown, Black, Grey
- Option 2 : Blue, Brown, Black, Grey, Black
- Option 3 : Upon customer request

60227 IEC 52 VCT

300/300V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 7

Construction : Conductor : Flexible annealed copper, size 0.5 - 0.75 mm²

Insulation : Polyvinylchloride (PVC)

Sheath : Polyvinylchloride (PVC)

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.5	16/0.20	0.5	0.6	4.6	5.9	0.012	37.62	100/C
	0.75	24/0.20	0.5	0.6	4.9	6.3	0.01	46.17	100/C
3	0.5	16/0.20	0.5	0.6	4.9	6.3	0.012	45.74	100/C
	0.75	24/0.20	0.5	0.6	5.2	6.7	0.010	56.98	100/C

C : Packing in coil.

Core Colour:

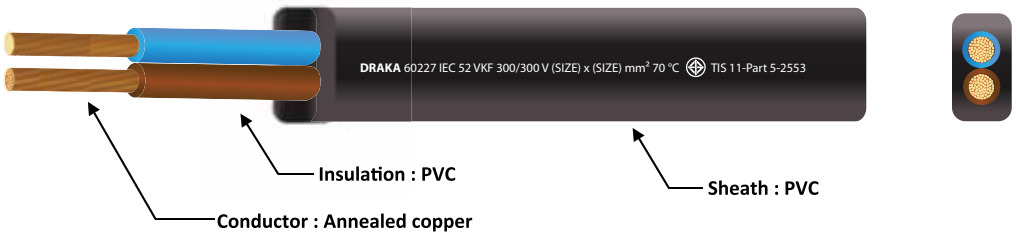
2 cores : Blue, Brown

3 cores :

- Option 1 : Green/Yellow, Blue, Brown
- Option 2 : Brown, Black, Grey

60227 IEC 52 VKF

300/300V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 7

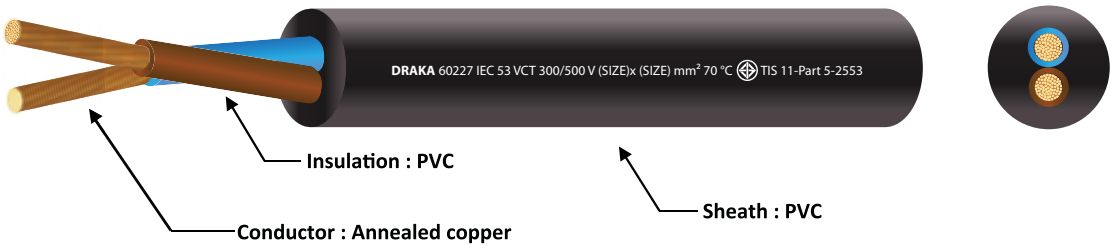
Construction : Conductor : Flexible annealed copper, size 0.5 - 0.75 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.5	16/0.20	0.5	0.6	3.0 x 4.9	3.7 x 5.9	0.012	30.90	100/C
	0.75	24/0.20	0.5	0.6	3.2 x 5.2	3.8 x 6.3	0.010	37.54	100/C

C : Packing in coil.
Core Colour:
2 cores : Blue, Brown
3 cores :
- Option 1 : Green/Yellow, Blue, Brown
- Option 2 : Brown, Black, Grey

60227 IEC 53 VCT

300/300V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 300 volts.
TIS 11-2553 : Part 5, Table 9

Construction : Conductor : Flexible annealed copper, size 0.75 - 2.5 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

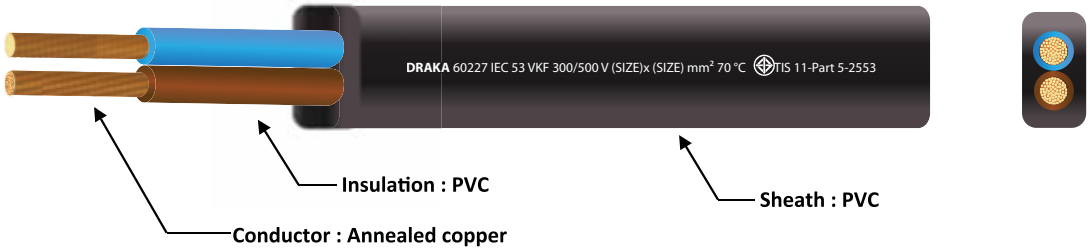
Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.75	24/0.20	0.6	0.8	5.7	7.2	0.011	57.06	100/C
	1	32/0.20	0.6	0.8	5.9	7.5	0.010	65.72	100/C
	1.5	30/0.25	0.7	0.8	6.8	8.6	0.010	88.85	100/C
	2.5	50/0.25	0.8	1.0	8.4	10.6	0.009	136.54	1000/D
3	0.75	24/0.20	0.6	0.8	6.0	7.6	0.011	58.50	100/C
	1	32/0.20	0.6	0.8	6.3	8.0	0.010	67.30	100/C
	1.5	30/0.25	0.7	0.9	7.4	9.4	0.010	94.58	100/C
	2.5	50/0.25	0.8	1.1	9.2	11.4	0.009	144.06	1000/D
4	0.75	24/0.20	0.6	0.8	6.6	8.3	0.011	60.90	100/C
	1	32/0.20	0.6	0.9	7.1	9.0	0.010	73.55	100/C
	1.5	30/0.25	0.7	1.0	8.4	10.5	0.010	102.37	100/C
	2.5	50/0.25	0.8	1.1	10.1	12.5	0.009	149.17	1000/D
5	0.75	24/0.20	0.6	0.9	7.4	9.3	0.011	67.34	100/C
	1	32/0.20	0.6	0.9	7.8	9.8	0.010	76.73	100/C
	1.5	30/0.25	0.7	1.1	9.3	11.6	0.010	111.41	100/C
	2.5	50/0.25	0.8	1.2	11.2	13.9	0.009	160.57	1000/D

C : Packing in coil
D : Packing in drum

Core Colour:	Option 1:	Option 2:
2 cores:	Blue, Brown	-
3 cores:	Green/Yellow, Blue, Brown	Brown, Black, Grey
4 cores:	Green/Yellow, Brown, Black, Grey	Blue, Brown, Black, Grey
5 cores:	Green/Yellow, Blue, Brown, Black, Grey	Blue, Brown, Black, Grey, Black

60227 IEC 53 VKF

300/300V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 300 volts.
TIS 11-2553 : Part 5, Table 9

Construction : Conductor : Flexible annealed copper, size 0.75 - 2.5 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

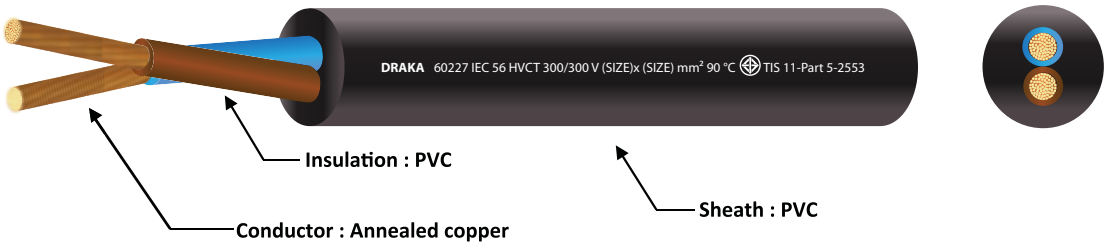
Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.75	24/0.20	0.6	0.8	3.7 x 6.0	4.5 x 7.2	0.011	55.75	100/C
	1	32/0.20	0.6	0.8	3.9 x 6.2	4.7 x 7.5	0.010	62.02	100/C

C : Packing in coil
D : Packing in drum

Core Colour:	Option 1:	Option 2:
2 cores:	Blue, Brown	-
3 cores:	Green/Yellow, Blue, Brown	Brown, Black, Grey
4 cores:	Green/Yellow, Brown, Black, Grey	Blue, Brown, Black, Grey
5 cores:	Green/Yellow, Blue, Brown, Black, Grey	Blue, Brown, Black, Grey, Black

60227 IEC 56 HVCT

300/300V 90°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 90°C Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 11

Construction : Conductor : Flexible annealed copper, size 0.5 - 0.75 mm²

Insulation : Polyvinylchloride (PVC)

Sheath : Polyvinylchloride (PVC)

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.5	16/0.20	0.5	0.6	4.6	5.9	0.012	37.62	100/C
	0.75	24/0.20	0.5	0.6	4.9	6.3	0.010	46.17	100/C
3	0.5	16/0.20	0.5	0.6	4.9	6.3	0.012	45.74	100/C
	0.75	24/0.20	0.5	0.6	5.2	6.7	0.010	56.98	100/C

C : Packing in coil.

Core Colour:

2 cores: Blue, Brown

3 cores:

- Option 1 : Green/Yellow, Blue, Brown
- Option 2 : Brown, Black, Grey

60227 IEC 56 HVKF

300/300V 90°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR

Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 90°C
Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 11

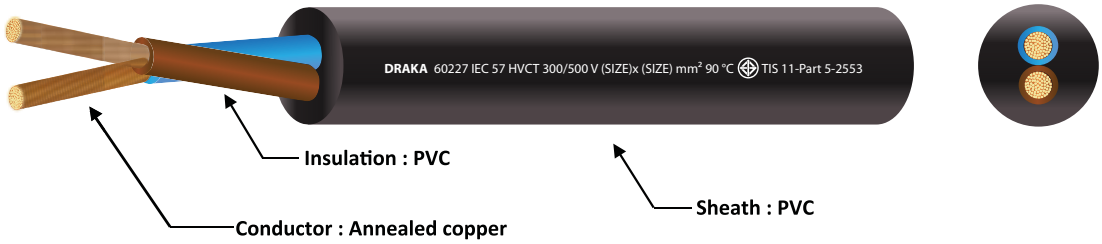
Construction : Conductor : Flexible annealed copper, size 0.5 - 0.75 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.5	16/0.20	0.5	0.6	3.0 x 4.9	3.7 x 5.9	0.012	30.90	100/C
	0.75	24/0.20	0.5	0.6	3.2 x 5.2	3.8 x 6.3	0.010	37.54	100/C

C : Packing in coil.
Core Colour:
2 cores: Blue, Brown
3 cores:
- Option 1 : Green/Yellow, Blue, Brown
- Option 2 : Brown, Black, Grey

60227 IEC 57 HVCT

300/300V 90°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 90°C
Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 13

Construction : Conductor : Flexible annealed copper, size 0.75 - 2.5 mm²
Insulation : Polyvinylchloride (PVC)
Sheath : Polyvinylchloride (PVC)

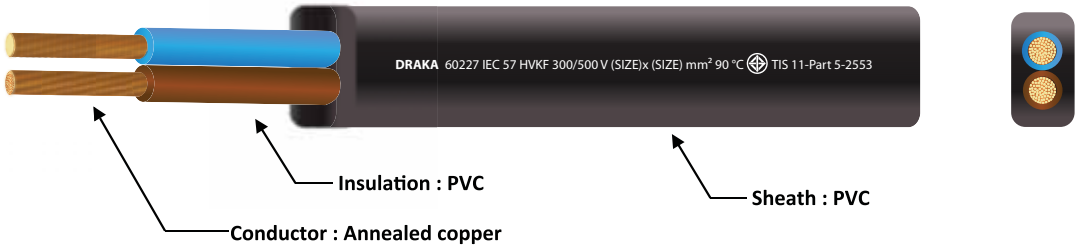
Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.75	24/0.20	0.6	0.8	5.7	7.2	0.011	57.06	100/C
	1	32/0.20	0.6	0.8	5.9	7.5	0.010	65.72	100/C
	1.5	30/0.25	0.7	0.8	6.8	8.6	0.010	88.85	100/C
	2.5	50/0.25	0.8	1.0	8.4	10.6	0.009	136.54	1000/D
3	0.75	24/0.20	0.6	0.8	6.0	7.6	0.011	58.50	100/C
	1	32/0.20	0.6	0.8	6.3	8.0	0.010	67.30	100/C
	1.5	30/0.25	0.7	0.9	7.4	9.4	0.010	94.58	100/C
	2.5	50/0.25	0.8	1.1	9.2	11.4	0.009	144.06	1000/D
4	0.75	24/0.20	0.6	0.8	6.6	8.3	0.011	60.90	100/C
	1	32/0.20	0.6	0.9	7.1	9.0	0.010	73.55	100/C
	1.5	30/0.25	0.7	1.0	8.4	10.5	0.010	102.37	100/C
	2.5	50/0.25	0.8	1.1	10.1	12.5	0.009	149.17	1000/D
5	0.75	24/0.20	0.6	0.9	7.4	9.3	0.011	67.34	100/C
	1	32/0.20	0.6	0.9	7.8	9.8	0.010	76.73	100/C
	1.5	30/0.25	0.7	1.1	9.3	11.6	0.010	111.41	100/C
	2.5	50/0.25	0.8	1.2	11.2	13.9	0.009	160.57	1000/D

C : Packing in coil
D : Packing in drum

Core Colour:	Option 1:	Option 2:
2 cores:	Blue, Brown	-
3 cores:	Green/Yellow, Blue, Brown	Brown, Black, Grey
4 cores:	Green/Yellow, Brown, Black, Grey	Blue, Brown, Black, Grey
5 cores:	Green/Yellow, Blue, Brown, Black, Grey	Blue, Brown, Black, Grey, Black

60227 IEC 57 HVKF

300/300V 90°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR



Application : Exposed wiring in air or in raceway, wet or dry location and used for moblie electrical equipment

Classification : Maximum conductor temperature 90°C Circuit voltage does not exceed 300 volts.

Standard : TIS 11-2553 : Part 5, Table 13

Construction : Conductor : Flexible annealed copper, size 0.75 - 2.5 mm²

Insulation : Polyvinylchloride (PVC)

Sheath : Polyvinylchloride (PVC)

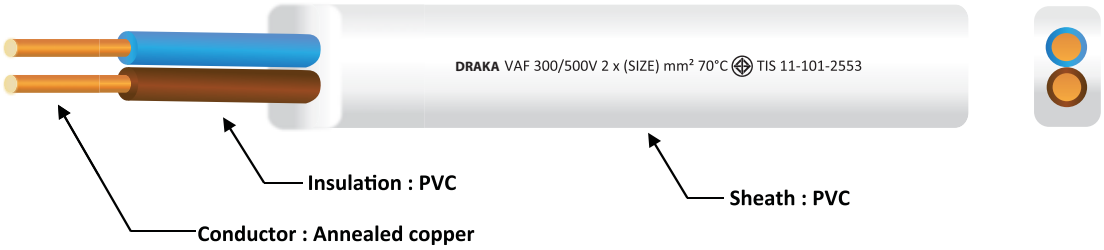
Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	0.75	24/0.20	0.6	0.8	3.7 x 6.0	4.5 x 7.2	0.011	55.75	100/C
	1	32/0.20	0.6	0.8	3.9 x 6.2	4.7 x 7.5	0.010	62.02	100/C

C : Packing in coil
D : Packing in drum

Core Colour:	Option 1:	Option 2:
2 cores:	Blue, Brown	-
3 cores:	Green/Yellow, Blue, Brown	Brown, Black, Grey
4 cores:	Green/Yellow, Brown, Black, Grey	Blue, Brown, Black, Grey
5 cores:	Green/Yellow, Blue, Brown, Black, Grey	Blue, Brown, Black, Grey, Black

VAF

300/500 V 70°C PVC INSULATED AND SHEATHED, FLAT TYPE



Application : For surface or above ceiling or direct embeded in plaster.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 Part 101, Table 1

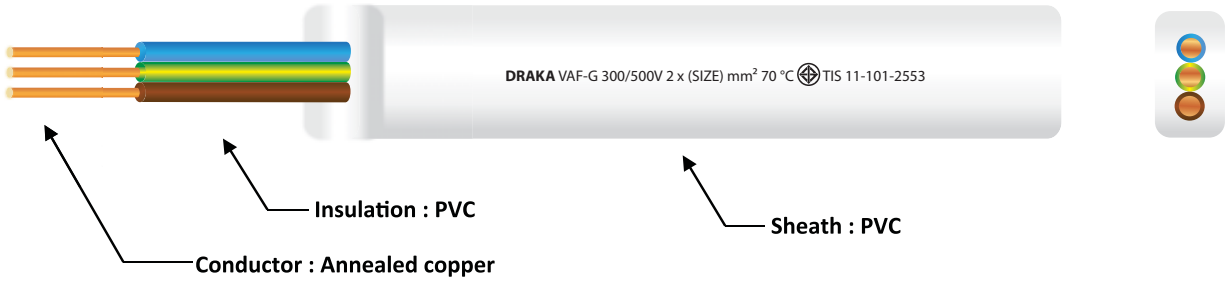
Construction : Conductor : Solid or stranded annealed copper, size 1 mm² up to 16 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	1	1/1.13	0.6	0.9	4.0 x6.2	4.7 x 7.4	0.0110	53	100/C
	1.5	1/1.38	0.7	0.9	4.4 x 7.0	5.4 x 8.4	0.0110	70	100/C
	2.5	1/1.78	0.8	1.0	5.2 x 8.4	6.2 x 9.8	0.0100	102	100/C
	4	7/0.85	0.8	1.1	5.6 x 9.6	7.2 x 11.5	0.0077	151	100/C
	6	7/1.04	0.8	1.1	6.4 x 10.5	8.0 x 13.0	0.0065	202	100/C
	10	7/1.35	1.0	1.2	7.8 x 13.0	9.6 x 16.0	0.0065	320	100/C
	16	7/1.70	1.0	1.3	9.0 x 15.5	11.0 x 18.5	0.0052	465	1000/D

C : Packing in coil.
Core Colour : Blue, Brown

VAF-G

300/500 V 70°C PVC INSULATED AND SHEATHED, FLAT TYPE



Application : For surface or above ceiling or direct embeded in plaster.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 500 volts.

Standard : TIS 11-2553 Part 101, Table 1

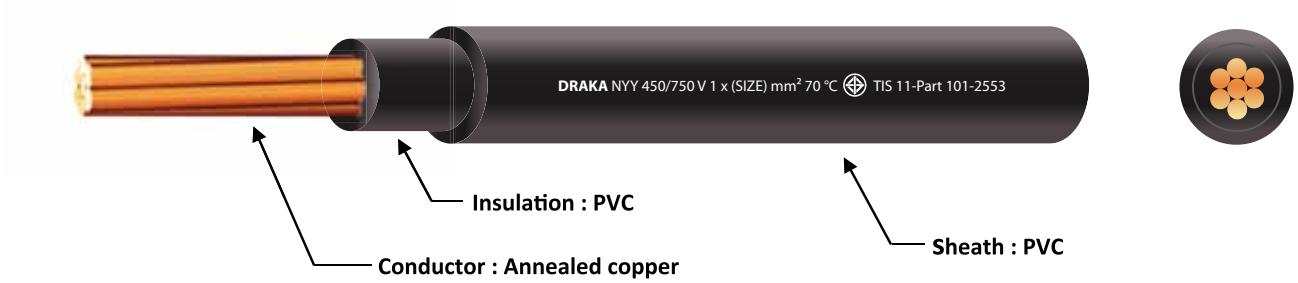
Construction : Conductor : Solid or stranded annealed copper, size 1 mm² up to 16 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)		Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
					Lower limit	Upper limit			
2	1/1	1/1.13	0.6	0.9	4.0 x 8.4	4.7 x 9.8	0.0110	62	100/C
	1.5/1.5	1/1.38	0.7	0.9	4.4 x 9.8	5.4 x 11.5	0.0110	81	100/C
	2.5/2.5	1/1.78	0.8	1.0	5.2 x 11.5	6.2 x 13.5	0.0100	118	100/C
	4/4	7/0.85	0.8	1.1	5.8 x 13.4	7.4 x 16.5	0.0077	172	100/C
	6/6	7/1.04	0.8	1.1	6.4 x 15.0	8.0 x 18.0	0.0065	227	100/C
	10/10	7/1.35	1.0	1.2	7.8 x 19.0	9.6 x 22.5	0.0065	355	100/C
	16/16	7/1.70	1.0	1.3	9.0 x 22.0	11.0 x 26.5	0.0052	509	1000/D

C : Packing in coil.
Core Colour : Option 1 : Green/Yellow, Blue, Brown
: Option 2 : Brown, Black, Grey

NYY

450/750 V 70°C PVC INSULATED AND SHEATHED, SINGLE CORE



Application : For installation exposed, or in raceway, wet or dry lacation, or direct bury in ground.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part, 101 Table 3

Construction : Conductor : Solid or Stranded annealed copper, size 1mm² up to 500 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
1	1/1.13	1.5	1.8	8.6	0.0207	80	1000/D
1	7/0.40	1.5	1.8	8.8	0.0200	80	1000/D
1.5	1/1.38	1.5	1.8	9.0	0.0184	90	1000/D
1.5	7/0.50	1.5	1.8	9.2	0.0175	90	1000/D
2.5	1/1.78	1.5	1.8	9.4	0.0157	100	1000/D
2.5	7/0.67	1.5	1.8	9.8	0.0146	100	1000/D
4	1/2.25	1.5	1.8	10.0	0.0135	130	1000/D
4	7/0.85	1.5	1.8	10.5	0.0124	130	1000/D
6	7/1.04	1.5	1.8	11.0	0.0107	160	1000/D
10	7/1.35	1.5	1.8	12.0	0.0088	210	1000/D
16	7/1.70	1.5	1.8	13.0	0.0074	280	1000/D
25	7/2.14	1.5	1.8	14.5	0.0061	390	1000/D
35	19/1.53	1.5	1.8	16.0	0.0053	500	1000/D
50	19/1.78	1.5	1.8	17.0	0.0046	660	1000/D
70	19/2.14	1.5	1.8	19.0	0.0039	850	1000/D
95	19/2.52	1.7	1.8	21.5	0.0038	1150	1000/D
120	37/2.03	1.7	1.8	23.0	0.0034	1400	1000/D
150	37/2.25	1.9	2.0	26.0	0.0034	1720	1000/D
185	37/2.52	2.1	2.0	28.0	0.0034	2130	500/D
240	61/2.25	2.3	2.2	31.5	0.0033	2760	500/D
300	61/2.52	2.5	2.2	35.0	0.0032	3400	500/D
400	61/2.85	2.7	2.2	38.5	0.0030	4290	500/D
500	61/3.20	3.1	2.4	43.0	0.0031	5570	500/D

D : Packing in drum.

NYY

450/750 V 70°C PVC INSULATED AND SHEATHED, TWO CORES

Application : For installation exposed, or in raceway, wet or dry lacation, or direct bury in ground.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 4

Construction : Conductor : Solid or Stranded annealed copper, size 50 mm² up to 300 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
50	19/1.78	1.5	1.2	2.2	33.5	0.0046	1880	1000/D
70	19/2.14	1.5	1.5	2.2	38.0	0.0039	2430	500/D
95	19/2.52	1.7	1.5	2.2	42.5	0.0038	3220	500/D
120	37/2.03	1.7	1.5	2.4	46.5	0.0034	3940	500/D
150	37/2.25	1.9	1.8	2.6	52.0	0.0034	4840	500/D
185	37/2.52	2.1	1.8	2.8	57.0	0.0034	5970	500/D
240	61/2.25	2.3	2.0	3.0	64.0	0.0033	7700	200/D
300	61/2.52	2.5	2.0	3.2	70.5	0.0032	9450	200/D

D : Packing in drum.
Core Colour : Blue, Brown or upon customer request

NYY

450/750 V 70°C PVC INSULATED AND SHEATHED, THREE CORES

Application : For installation exposed, or in raceway, wet or dry lacation, or direct bury in ground.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 4

Construction : Conductor : Solid or Stranded annealed copper, size 50 mm² up to 300 mm²

Insulation : Polyvinylchloride

Sheath : Polyvinylchloride

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
50	19/1.78	1.5	1.5	2.2	36.0	0.0046	2440	500/D
70	19/2.14	1.5	1.5	2.2	40.5	0.0039	3110	500/D
95	19/2.52	1.7	1.5	2.4	46.0	0.0038	4180	500/D
120	37/2.03	1.7	1.8	2.6	50.5	0.0034	5190	500/D
150	37/2.25	1.9	1.8	2.8	56.0	0.0034	6300	500/D
185	37/2.52	2.1	2.0	3.0	61.5	0.0034	7840	500/D
240	61/2.25	2.3	2.0	3.2	69.0	0.0033	10060	200/D
300	61/2.52	2.5	2.2	3.4	76.0	0.0032	12450	200/D

D : Packing in drum.

Core Colour : Green/Yellow, Blue, Brown or Brown, Black, Grey or upon customer request

NYY

450/750 V 70°C PVC INSULATED AND SHEATHED, FOUR CORES

Application : For installation exposed, or in raceway, wet or dry lacation, or direct bury in ground.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 4

Construction : Conductor : Solid or Stranded annealed copper, size 50 mm² up to 300 mm²

Insulation : Polyvinylchloride

Sheath : Polyvinylchloride

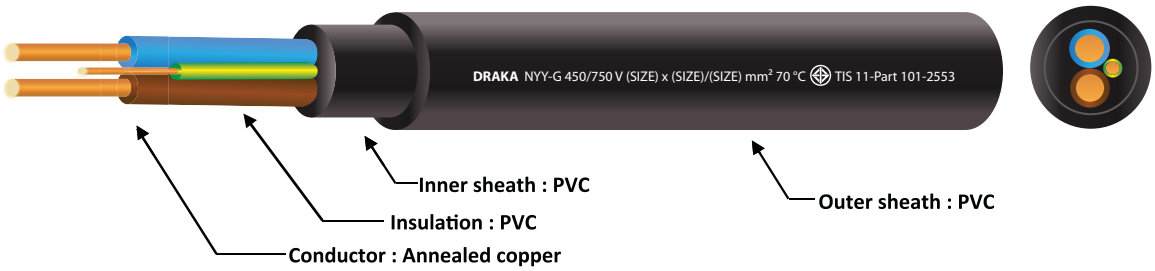
Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
50	19/1.78	1.5	1.5	2.2	39.5	0.0046	3070	500/D
70	19/2.14	1.5	1.5	2.4	44.5	0.0039	3970	500/D
95	19/2.52	1.7	1.8	2.6	51.5	0.0038	5410	500/D
120	37/2.03	1.7	1.8	2.8	56.0	0.0034	6640	500/D
150	37/2.25	1.9	2.0	3.0	62.0	0.0034	8130	500/D
185	37/2.52	2.1	2.0	3.2	68.0	0.0034	10050	200/D
240	61/2.25	2.3	2.2	3.4	76.5	0.0033	12960	200/D
300	61/2.52	2.5	2.2	3.8	85.0	0.0032	16040	200/D

D : Packing in drum.

Core Colour : Green/Yellow, Brown, Black, Grey or Blue, Brown, Black, Grey or upon customer request

NYY-G

450/750 V 70°C PVC INSULATED AND SHEATHED, MULTICORE WITH GROUND



Application : For installation exposed, or in raceway, wet or dry lacation, or direct bury in ground.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 5

Construction : Conductor : Solid or Stranded annealed copper, size 25mm² up to 300mm² Ground conductor size 16mm² up to 150mm²

Insulation : Polyvinylchloride

Sheath : Polyvinylchloride

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Nominal cross section of ground (mm²)	Insulation thickness of phase (mm)	Insulation thickness of ground (mm)	Inner sheath thickness (mm)	Outer sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
2	25	7/2.14	16	1.3	1.1	1.2	2.0	28.0	0.0054	1202	1000/D
	35	19/1.53	16	1.3	1.1	1.2	2.0	30.0	0.0047	1454	1000/D
	50	19/1.78	25	1.5	1.3	1.2	2.2	34.0	0.0046	1952	1000/D
	70	19/2.14	35	1.5	1.3	1.5	2.2	38.5	0.0039	2584	500/D
	95	19/2.52	50	1.7	1.5	1.5	2.2	43.5	0.0038	3421	500/D
	120	37/2.03	70	1.7	1.5	1.5	2.4	47.5	0.0034	4274	500/D
	150	37/2.25	95	1.9	1.7	1.8	2.6	53.0	0.0034	5376	500/D
	185	37/2.52	95	2.1	1.7	1.8	2.8	57.5	0.0034	6391	500/D
	240	61/2.25	120	2.3	1.7	2.0	3.0	64.5	0.0033	8232	500/D
	300	61/2.52	150	2.5	1.9	2.0	3.2	71.0	0.0032	10126	200/D

D : Packing in drum.

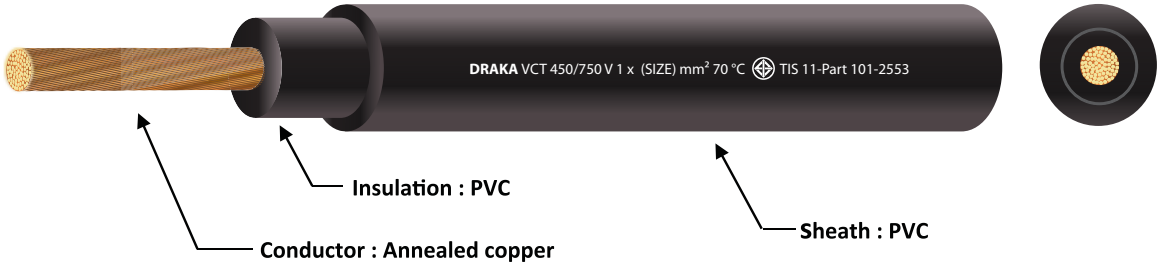
Core Colour : Green/Yellow, Blue, Brown or upon customer request

Core Colour : Green/Yellow, Brown, Black, Grey or upon customer request

Core Colour : Green/Yellow, Blue, Brown, Black, Grey or upon customer request

VCT

450/750 V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR, SINGLE CORE



Application : For moblie-electrical eqiupment used in mines, factories, farm or house hold appliances. This cable is particularly suitable for use in chemical factories or in places where cables come in contact with oils.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 7

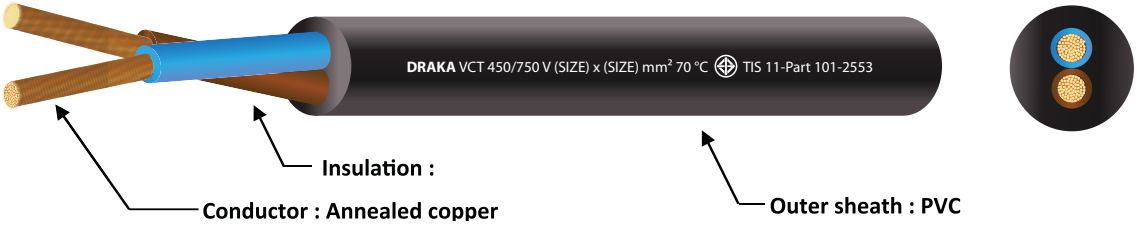
Construction : Conductor : Flexible annealed copper, size 4mm² up to 35mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
4	56/0.30	0.9	1.4	8.6	0.0084	90	100/C
6	84/0.30	0.9	1.4	9.4	0.0071	110	100/C
10	80/0.40	1.1	1.8	12.0	0.0068	210	1000/D
16	126/0.40	1.1	1.8	13.5	0.0050	270	1000/D
25	196/0.40	1.3	2.2	16.0	0.0048	410	1000/D
35	276/0.40	1.3	2.2	17.5	0.0041	540	1000/D

C : Packing in coil.
D : Packing in drum.
Core Colour : Black, White, Red, Blue, Green, Yellow, Green/Yellow or upon customer request

VCT

450/750 V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR, MULTICORE



Application : For moblie-electrical eqiupment used in mines, factories, farm or house hold appliances. This cable is particularly suitable for use in chemical factories or in places where cables come in contact with oils.

Classification : Maximum conductor temperature 70°C
Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 : Part 101, Table 7

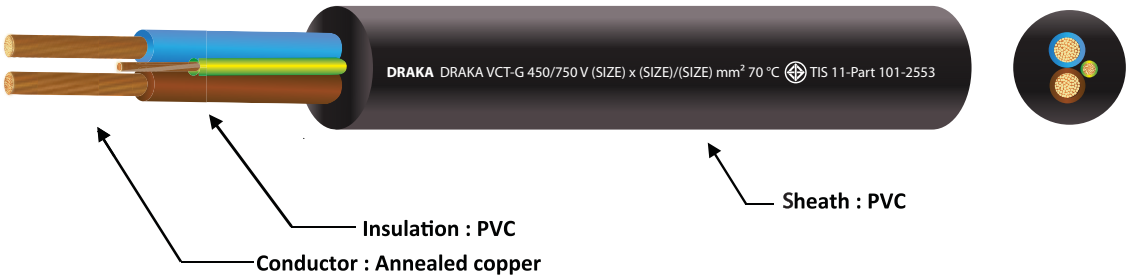
Construction : Conductor : Flexible annealed copper, size 4 mm² up to 35 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Insulation thickness (mm)	Sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
2	4	56/0.30	0.9	1.6	14.5	0.0084	230	1000/D
	6	84/0.30	0.9	1.6	16.0	0.0071	290	1000/D
	10	80/0.40	1.1	1.8	20.0	0.0068	510	1000/D
	16	126/0.40	1.1	2.2	23.0	0.0050	710	1000/D
	25	196/0.40	1.3	2.4	27.5	0.0048	1030	1000/D
	35	276/0.40	1.3	2.6	31.0	0.0041	1380	1000/D
3	4	56/0.30	0.9	1.6	15.5	0.0084	280	1000/D
	6	84/0.30	0.9	1.8	17.5	0.0071	270	1000/D
	10	80/0.40	1.1	2.0	21.5	0.0068	650	1000/D
	16	126/0.40	1.1	2.4	25.0	0.0050	900	1000/D
	25	196/0.40	1.3	2.6	30.0	0.0048	1320	1000/D
	35	276/0.40	1.3	2.8	33.5	0.0041	1770	1000/D
4	4	56/0.30	0.9	1.8	17.0	0.0084	350	1000/D
	6	84/0.30	0.9	2.0	19.5	0.0071	480	1000/D
	10	80/0.40	1.1	2.2	24.0	0.0068	820	1000/D
	16	126/0.40	1.1	2.6	28.0	0.0050	1150	1000/D
	25	196/0.40	1.3	2.8	33.0	0.0048	1680	1000/D
	35	276/0.40	1.3	3.1	37.0	0.0041	2290	1000/D

D : Packing in drum.
Core Colour : Blue, Brown or upon customer request
Core Colour : Green/Yellow, Blue, Brown or Brown, Black, Grey or upon customer request
Core Colour : Green/Yellow, Brown, Black, Grey or Blue, Brown, Black, Grey or upon customer request

VCT-G

450/750 V 70°C PVC INSULATED AND SHEATHED FLEXIBLE CONDUCTOR MULTI CORE WITH GROUND



Application : For moblie-electrical eqiupment used in mines, factories, farm or house hold appliances. This cable is particularly suitable for use in chemical factories or in places where cables come in contact with oils.

Classification : Maximum conductor temperature 70°C Circuit voltage does not exceed 750 volts.

Standard : TIS 11-2553 Part 101, Table 8

Construction : Conductor : Flexible annealed copper, size 4 mm² up to 35 mm²
Insulation : Polyvinylchloride
Sheath : Polyvinylchloride

Number of core	Nominal cross sectional area (mm²)	Number and diameter of wire (No./mm)	Nominal cross section of ground (mm²)	Insulation thickness of phase (mm)	Insulation thickness of ground (mm)	Outer Sheath thickness (mm)	Overall diameter (mm)	Minimum insulation resistance at 70°C (MΩ.km)	Cable weight (approx.) (kg/km)	Standard length (m)
2	4	56/0.30	4	0.9	0.9	1.6	15.5	0.0084	285	1000/D
	6	84/0.30	6	0.9	0.9	1.8	17.5	0.0071	382	1000/D
	10	80/0.40	10	1.1	1.1	2.0	21.5	0.0068	601	1000/D
	16	126/0.40	16	1.1	1.1	2.4	25.0	0.0050	870	1000/D
	25	196/0.40	16	1.3	1.1	2.6	28.5	0.0048	1169	1000/D
	35	276/0.40	16	1.3	1.1	2.8	31.5	0.0041	1464	1000/D
3	4	56/0.30	4	0.9	0.9	1.6	15.5	0.0084	359	1000/D
	6	84/0.30	6	0.9	0.9	1.8	17.5	0.0071	482	1000/D
	10	80/0.40	10	1.1	1.1	2.0	21.5	0.0068	757	1000/D
	16	126/0.40	16	1.1	1.1	2.4	25.0	0.0050	1095	1000/D
	25	196/0.40	16	1.3	1.1	2.6	28.5	0.0048	1504	1000/D
	35	276/0.40	16	1.3	1.1	2.8	31.5	0.0041	1925	1000/D
4	4	56/0.30	4	0.9	0.9	1.6	15.5	0.0084	425	1000/D
	6	84/0.30	6	0.9	0.9	1.8	17.5	0.0071	572	1000/D
	10	80/0.40	10	1.1	1.1	2.0	21.5	0.0068	902	1000/D
	16	126/0.40	16	1.1	1.1	2.4	25.0	0.0050	1308	1000/D
	25	196/0.40	16	1.3	1.1	2.6	28.5	0.0048	1827	1000/D
	35	276/0.40	16	1.3	1.1	2.8	31.5	0.0041	2361	1000/D

D : Packing in drum.
Core Colour : Green/Yellow, Blue, Brown or upon customer request
Core Colour : Green/Yellow, Brown, Black, Grey or upon customer request
Core Colour : Green/Yellow, Blue, Brown, Black, Grey or upon customer request

SECTION 2 :
LOW VOLTAGE POWER AND CONTROL CABLES

CE EXTENDED PRODUCT OFFE

WORLDWIDE LE

SUPPORTING GLOBAL UTILITIES IN THE

OF SMARTER AND GREENER POWER GR

STRONGER PLATFORI

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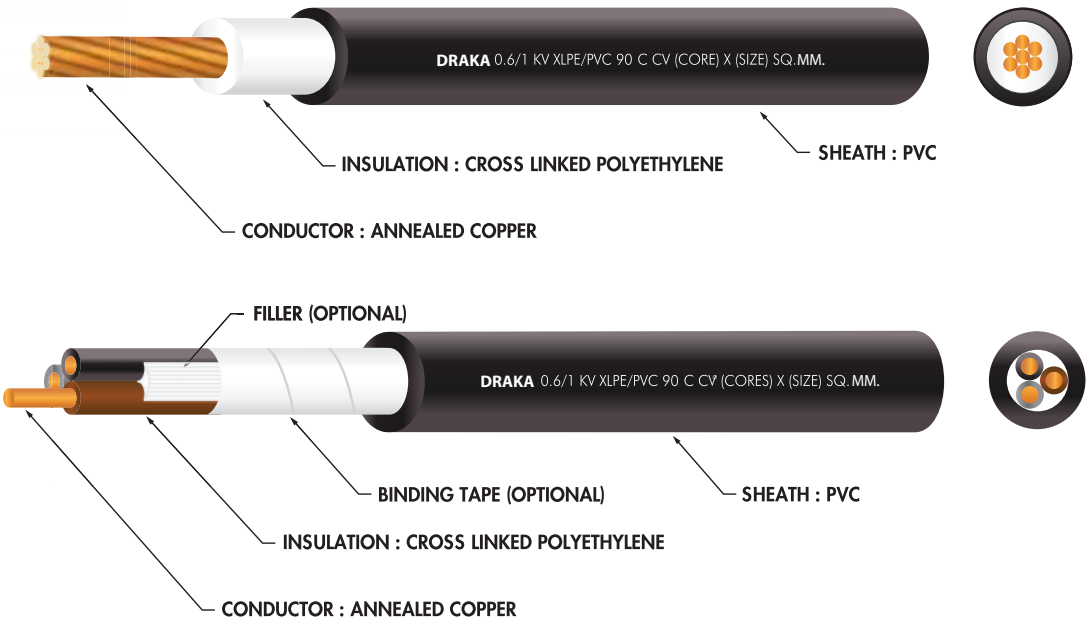
CV

600/1000 V 90°C CROSS - LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE



Application : For use in fixed installation in industrial areas, buildings and other similar applications.

Classification : Maximum conductor temperature 90°C
Circuit voltage not exceeding 1,000 volts

Testing Voltage : 3,500 volts

Standard : IEC 60502

Option : Filler
Binding tape

Construction : Number of core : Up to 4 cores

Conductor : Concentric stranded annealed copper, sizes
Single core : size 2.5 mm^2 up to 1000 mm^2
Multi core : size 2.5 mm^2 up to 400 mm^2

Insulation : Cross-linked PE.
Color : Natural (Translucent)
Core identification : For natural cross-linked PE. will be marked with black core number.
For coloured insulation, the cores are identified as follows :

No. of Cores	Single	Two	Three	Four	Five & above
Colour	Natural	Blue and Brown	Brown, Black and Grey	Blue,Brown, Black and Grey	Blue,Brown, Black, Grey and Black

Sheath : Polyvinyl chloride (PVC)
Black Colour

Note: We reserve the right to alter this specification without notice.

Number of core	Nominal cross sectional area (mm^2)	Number and diameter of wire (No./mm)	Mean value of insulation thickness (mm)	Mean value of sheath thickness (mm)	Approximate overall diameter (mm)	Maximum conductor resistance at 20°C (Ω/km)	Minimum insulation resistance at 20°C (MΩ . km)	Maximum continuous current rating in free air (A)	Cable weight (approx.) (kg/km)	Standard length (m)
1	2.5	7/0.67	0.7	1.4	6.5	7.41	2100	36	65	500/D
	4	7/0.85	0.7	1.4	7.0	4.61	1700	48	80	500/D
	6	7/1.04	0.7	1.4	7.5	3.08	1450	61	100	500/D
	10	7/1.35	0.7	1.4	8.1	1.83	1250	82	140	500/D
	16	7/1.70	0.7	1.4	9.5	1.15	1000	110	200	500/D
	25	7/2.14	0.9	1.4	11.5	0.727	1050	145	300	500/D
	35	19/1.53	0.9	1.4	12.6	0.524	900	180	400	500/D
	50	19/1.78	1.0	1.4	14.0	0.367	850	220	500	500/D
	70	19/2.14	1.1	1.4	16.0	0.268	800	280	750	500/D
	95	19/2.52	1.1	1.5	18.2	0.193	850	345	1000	500/D
	120	37/2.03	1.2	1.5	19.9	0.153	650	400	1200	500/D
	150	37/2.25	1.4	1.6	22.1	0.124	700	460	1500	500/D
	185	37/2.52	1.6	1.6	23	0.0991	700	530	1900	500/D
	240	61/2.25	1.7	1.7	29	0.0754	650	630	2500	500/D
	300	61/2.52	1.8	1.8	29	0.0601	600	725	3100	500/D
	400	61/2.85	2.0	1.9	32	0.0470	600	840	3900	500/D
	500	61/3.20	2.2	2.0	36	0.0366	600	975	5000	500/D
	630	127/2.52	2.4	2.2	40	0.0283	550	1125	6500	500/D
	800	127/2.85	2.6	2.3	46	0.0221	550	1320	8500	300/D
	1000	127/3.20	2.8	2.4	51	0.0176	500	1510	10500	300/D
2	2.5	7/0.67	0.7	1.8	11.5	7.41	2100	34	160	500/D
	4	7/0.85	0.7	1.8	12.5	4.61	1700	44	200	500/D
	6	7/1.04	0.7	1.8	14.0	3.08	1450	57	250	500/D
	10	7/1.35	0.7	1.8	15.0	1.83	1250	77	340	500/D
	16	7/1.70	0.7	1.8	17.0	1.15	1000	100	480	500/D
	25	7/2.14	0.9	1.8	21	0.727	1050	135	700	500/D
	35	19/1.53	0.9	1.8	23	0.524	900	165	900	500/D
	50	19/1.78	1.0	1.8	26	0.387	850	205	1200	500/D
	70	19/2.14	1.1	1.8	29	0.268	800	255	1700	500/D
	95	19/2.52	1.1	2.0	33	0.193	650	315	2300	500/D
	120	37/2.03	1.2	2.1	37	0.153	650	365	2800	500/D
	150	37/2.25	1.4	2.2	41	0.124	700	415	3500	500/D
	185	37/2.52	1.6	2.3	45	0.0991	700	485	4300	500/D
	240	61/2.52	1.7	2.5	51	0.0754	650	580	5500	500/D
	300	61/2.52	1.8	2.7	56	0.0601	600	675	7000	300/D
	400	61/2.85	2.0	2.9	63	0.0470	600	790	9000	300/D

D : Packing in drum.

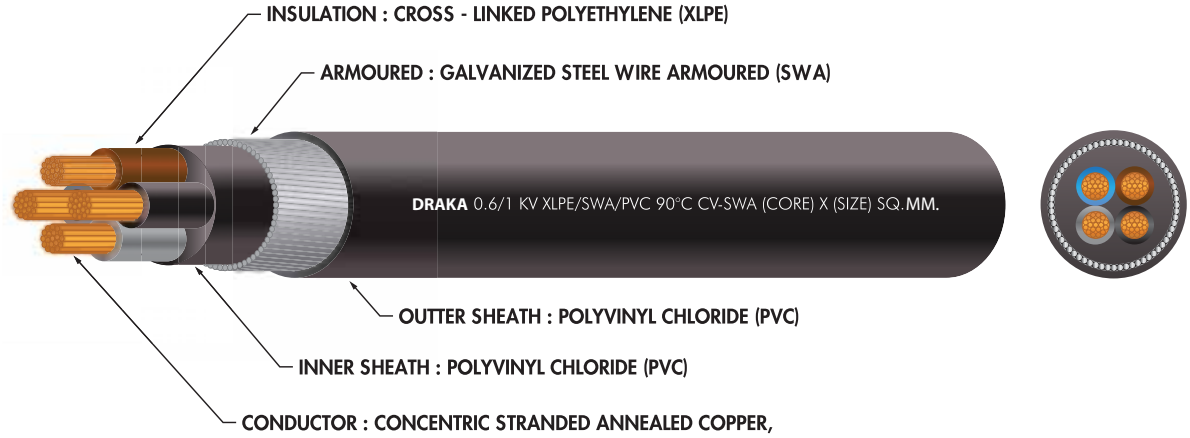
Note: We reserve the right to alter this specification without notice.

Number of core	Nominal cross sectional ared (mm^2)	Number and diameter of wire (No./mm)	Mean value of insulation thickness (mm)	Mean value of sheath thickness (mm)	Approximate overall diameter (mm)	Maximum conductor resistance at 20°C (Ω/km)	Minimum insulation resistance at 20°C (MΩ . km)	Maximum continuous current rating in free air (A)	Cable weight (approx.) (kg/km)	Standard length (m)
3	2.5	7/0.67	0.7	1.8	12.5	7.41	2100	28	190	500/D
	4	7/0.85	0.7	1.8	13.5	4.61	1700	37	250	500/D
	6	7/1.04	0.7	1.8	14.5	3.08	1450	48	320	500/D
	10	7/1.35	0.7	1.8	16.0	1.83	1250	64	440	500/D
	16	7/1.70	0.7	1.8	18.0	1.15	1000	86	650	500/D
	25	7/2.14	0.9	1.8	22	0.727	1050	115	950	500/D
	35	19/1.53	0.9	1.8	24	0.524	900	140	1300	500/D
	50	19/1.78	1.0	1.8	27	0.387	850	170	1700	500/D
	70	19/2.14	1.1	1.9	31	0.268	800	215	2300	500/D
	95	19/2.52	1.1	2.0	36	0.193	650	260	3100	500/D
	120	37/2.03	1.2	2.1	39	0.153	650	305	3900	500/D
	150	37/2.25	1.5	2.3	44	0.124	700	350	4900	500/D
	185	37/2.52	1.6	2.4	49	0.0991	700	405	6000	500/D
	240	61/2.25	1.7	2.6	55	0.0754	850	490	8000	300/D
	300	61/2.52	1.8	2.8	61	0.0601	600	565	9500	300/D
	400	61/2.85	2.0	3.1	68	0.0470	600	655	12500	200/D
4	2.5	7/0.67	0.7	1.8	13.0	7.41	2100	28	230	500/D
	4	7/0.85	0.7	1.8	14.5	4.61	1700	37	300	500/D
	6	7/1.04	0.7	1.8	16.0	3.08	1450	48	390	500/D
	10	7/1.35	0.7	1.8	17.5	1.83	1250	64	550	500/D
	16	7.1.70	0.7	1.8	20	1.15	1000	86	800	500/D
	25	7/2.14	0.9	1.8	24	0.727	1050	115	1200	500/D
	35	19/1.53	0.9	1.8	27	0.524	900	140	1600	500/D
	50	19/1.78	1.0	1.9	30	0.387	850	170	2200	500/D
	70	19/2.14	1.1	2.0	35	0.268	800	215	3000	500/D
	95	19/2.52	1.1	2.1	39	0.193	650	260	4100	500/D
	120	37/2.03	1.2	2.3	44	0.153	650	305	5000	500/D
	150	37/2.25	1.4	2.4	49	0.124	700	350	6500	500/D
	185	37/2.52	1.6	2.6	54	0.0991	700	405	8000	300/D
	240	61/2.25	1.7	2.8	61	0.0754	650	490	10000	300/D
	300	61/2.52	1.8	3.0	68	0.0601	600	565	13000	200/D
	400	61/2.85	2.0	3.3	76	0.0470	600	655	16000	200/D

D : Packing in drum.
Note: We reserve the right to alter this specification without notice.

CV - SWA

600/1000 V 90°C CROSS - LINKED POLYETHYLENE INSULATED AND PVC SHEATHED, ARMOURED TYPE



Application : For installation exposed, or in raceway, or in dry and damp areas indoors and outdoors for laying underground.

Classification : Maximum conductor temperature 90°C
Circuit voltage not exceeding 1,000 volts

Testing Voltage : 3,500 volts

Standard : IEC 60502

Optional : Filler
Binder tape
Single Core Aluminium Wire Armoured (AWA) upon requested.

Construction :

Number of core : Up to 4 cores

Conductor : Concentric stranded annealed copper, sizes 2.5 mm^2 up to 1000 mm^2

Insulation : Cross-Linked Polyethylene (XLPE)

Core identification : For natural cross-linked PE. will be marked with black core number. For coloured insulation, the cores are identified as follows :

No. of Cores	Two	Three	Four	Five & above
Colour	Blue and Brown	Brown, Black and Grey	Blue,Brown, Black and Grey	Blue,Brown, Black, Grey and Black

Inner Sheath : Polyvinyl chloride (PVC) Black Colour

Armoured : Galvanized Steel Wire Armoured (SWA)

Outter Sheath : Polyvinyl chloride (PVC) Black Colour

Note: We reserve the right to alter this specification without notice.

CV - SWA 2 Cores

No of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & Dia armour wire	Overall diameter after amoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No. & dia of wires										
	mm^2	No./mm	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	No./mm. (Approx.)	mm. (Approx.)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
2	1.5	7/0.53	0.7	1.0	8	30/0.9	10	1.8	13	12.1	353	500
2	2.5	7/0.67	0.7	1.0	9	33/0.9	11	1.8	14	7.41	405	500
2	4	7/0.85	0.7	1.0	10	37/0.9	12	1.8	15	4.61	480	500
2	6	7/1.04	0.7	1.0	11	41//0.9	13	1.8	17	3.08	568	500
2	10	7/1.35	0.7	1.0	13	47/0.9	15	1.8	19	1.83	734	500
2	16	7/1.70	0.7	1.0	15	40/1.25	18	1.8	21	1.15	1070	500
2	25	7/2.14	0.9	1.0	19	49/1.25	21	1.8	25	0.727	1470	500
2	35	19/1.53	0.9	1.1	21	42/1.6	24	1.9	28	0.524	1968	500
2	50	19/1.78	1.0	1.1	24	48/1.6	27	2.0	32	0.387	2444	500
2	70	19/2.14	1.1	1.2	28	56/1.6	32	2.1	36	0.258	3219	300
2	95	19/2.52	1.1	1.2	32	51/2.0	37	2.2	41	0.193	4363	300
2	120	37/2.03	1.2	1.2	37	58/2.0	41	2.4	46	0.153	5313	200
2	150	37/2.25	1.4	1.4	45	70/2.0	49	2.6	54	0.124	6875	200
2	185	37/2.52	1.6	1.4	45	57/2.5	51	2.7	56	0.0991	8073	150
2	240	61/2.25	1.7	1.6	51	64/2.5	57	3.0	63	0.0754	10051	150
2	300	61/2.52	1.8	1.6	57	70/2.5	62	3.2	68	0.0601	12009	150

CV - SWA 3 Cores

No of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & Dia armour wire	Overall diameter after amoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No. & dia of wires										
	mm^2	No./mm	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	No./mm. (Approx.)	mm. (Approx.)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
3	1.5	7/0.53	0.7	1.0	8	31/0.9	10	1.8	14	12.1	370	500
3	2.5	7/0.67	0.7	1.0	9	34/0.9	11	1.8	15	7.41	432	500
3	4	7/0.85	0.7	1.0	10	28/1.25	13	1.8	16	4.61	610	500
3	6	7/1.04	0.7	1.0	12	31/1.25	14	1.8	18	3.08	726	500
3	10	7/1.35	0.7	1.0	14	36/1.25	16	1.8	20	1.83	946	500
3	18	7/1.70	0.7	1.0	16	32/1.60	19	1.8	23	1.15	1348	500
3	25	7/2.14	0.9	1.0	20	39/1.80	23	1.8	26	0.727	1847	500
3	35	19/1.53	0.9	1.1	22	44/1.60	25	1.9	29	0.524	2294	500
3	50	19/1.78	1.0	1.1	25	41/2.00	29	2.1	34	0.387	3106	500
3	70	19/2.14	1.1	1.2	30	48/2.00	34	2.2	39	0.268	4120	300
3	95	19/2.52	1.1	1.2	34	54/2.00	36	2.4	43	0.193	5248	300
3	120	37/2.03	1.2	1.4	38	60/2.00	42	2.5	48	0.153	6380	200
3	150	37/2.25	1.4	1.4	42	66/2.00	47	2.7	52	0.124	7605	150
3	185	37/2.52	1.6	1.4	47	74/2.00	51	2.8	57	0.0991	9217	150
3	240	61/2.25	1.7	1.6	54	83/2.00	58	3.1	64	0.0754	11629	150
3	300	61/2.52	1.8	1.6	60	92/2.00	64	3.3	70	0.0801	14084	150

D : Packing in drum.

CV - SWA 4 Cores

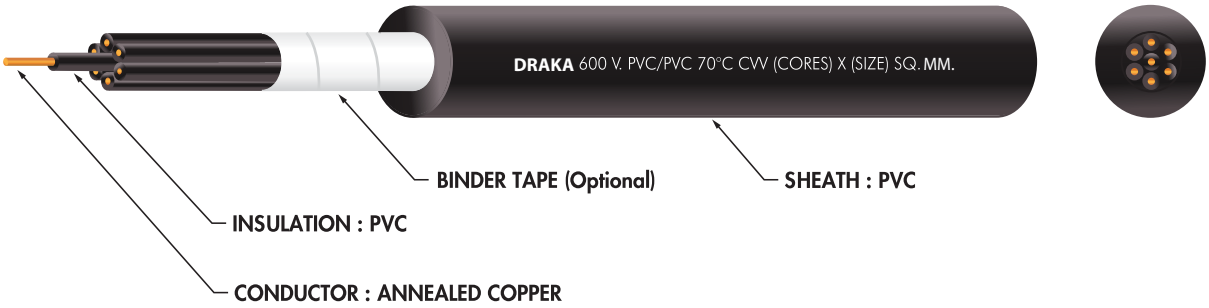
No of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & Dia armour wire	Overall diameter after amoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No. & dia of wires										
	mm^2	No./mm	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	No./mm. (Approx.)	mm. (Approx.)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
4	1.5	7/0.53	0.7	1.0	9	34/0.90	11	1.8	14	12.1	408	500
4	2.5	7/0.67	0.7	1.0	10	27/1.25	13	1.8	16	7.41	559	500
4	4	7/0.85	0.7	1.0	11	31/1.25	14	1.8	17	4.61	687	500
4	6	7/1.04	0.7	1.0	13	34/1.25	15	1.8	19	3.08	828	500
4	10	7/1.35	0.7	1.0	15	40/1.25	17	1.8	21	1.83	1094	500
4	16	7/1.70	0.7	1.0	17	36/1.60	21	1.8	24	1.15	1572	500
4	25	7/2.14	0.9	1.0	22	43/1.60	25	1.9	29	0.727	2197	500
4	35	19/1.53	0.9	1.0	25	49/1.60	28	2.0	32	0.524	2752	500
4	50	19/1.78	1.0	1.1	28	45/2.00	32	2.2	37	0.387	3685	300
4	70	19/2.14	1.1	1.2	33	53/2.00	37	2.3	42	0.268	4849	300
4	95	19/2.52	1.1	1.4	38	60/2.00	42	2.5	47	0.193	6278	200
4	120	37/2.03	1.2	1.4	43	67/2.00	47	2.7	52	0.153	7682	150
4	150	37/2.25	1.4	1.4	47	74/2.00	51	2.8	57	0.124	9058	150
4	185	37/2.52	1.6	1.6	53	82/2.00	57	3.0	63	0.0991	11092	150
4	240	61/2.25	1.7	1.6	60	92/2.00	70	3.3	70	0.0754	13948	150
4	300	61/2.52	1.8	1.8	67	102/2.00	71	3.5	78	0.0604	17047	150

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV

600 V 70°C PVC INSULATED AND SHEATHED CONTROL CABLE



Application : Supervisory electrical equipment, station control circuits. Outdoor, suitable installation in the wet or dry cable trenches.

Classification : maximum conductor temperature 70°C Rated circuit voltage 600 volts.

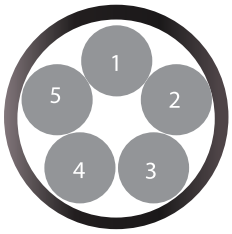
Testing voltage : 3,500 volts.

Applicable Standard : IEC 60502

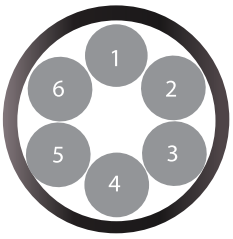
Optional Standard : JIS C 3401

Optional : Filler
Binder tape

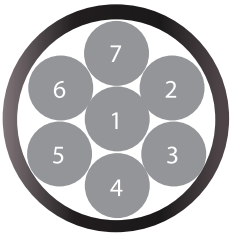
Construction :
- Number of core : 2-30 cores
- Conductor : Annealed copper conductor (Optional : Solid & stranded or Flexible concentric standed.)
- Insulation : Polyvinyl chloride colour 2-4 cores : Red, Yellow Blue, Black. more than 4 cores : Black colour with marking core numbers.
- Sheath : Polyvinyl chloride (Black colour).



5 CORES



6 CORES



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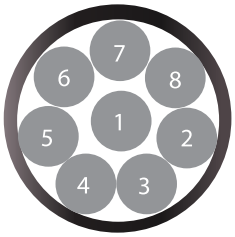
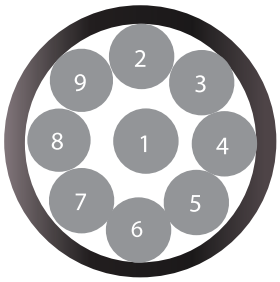
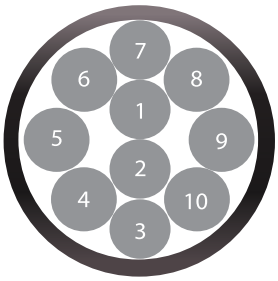


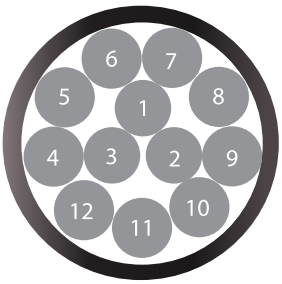
8 CORES



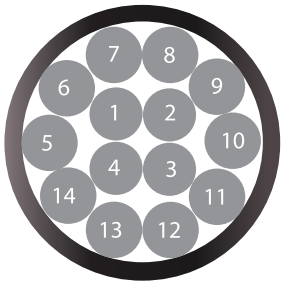
9 CORES



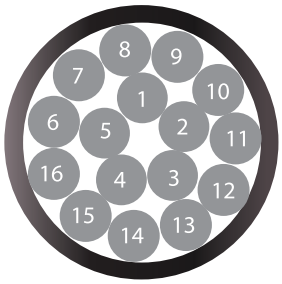
10 CORES



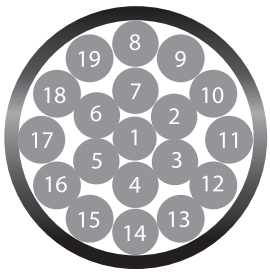
12 CORES



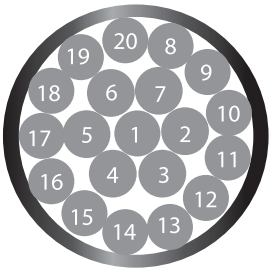
14 CORES



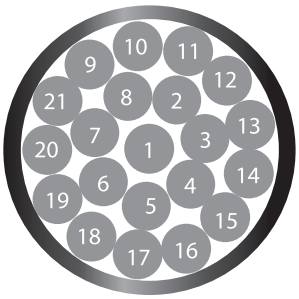
16 CORES



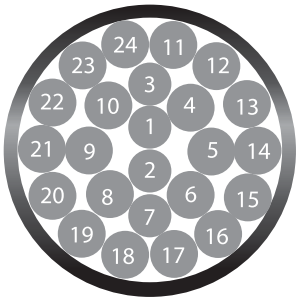
19 CORES



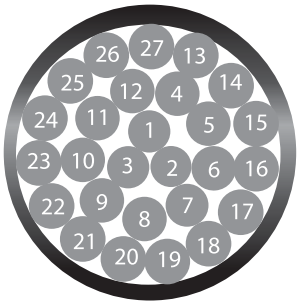
20 CORES



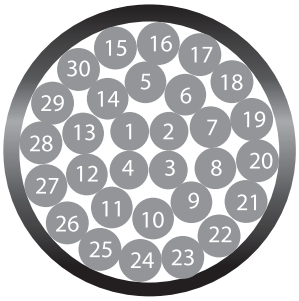
21 CORES



24 CORES



27 CORES



30 CORES

No of core	Conductor		Insulation thickness	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size mm²	No. & dia. of wires No./mm.	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
2	0.5	7/0.30	0.8	1.8	8.5	36	79	500
	0.75	7/0.37	0.8	1.8	8.8	24.5	88	500
	1	7/0.43	0.8	1.8	9.3	18.1	99	500
	1.5	7/0.53	0.8	1.8	9.8	12.1	115	500
	2.5	7/0.67	0.8	1.8	10.6	7.41	143	500
	4	7/0.85	1.0	1.8	12.5	4.61	200	500
3	0.5	7/0.30	0.8	1.8	8.9	36	94	500
	0.75	7/0.37	0.8	1.8	9.2	24.5	106	500
	1	7/0.43	0.8	1.8	9.7	18.1	121	500
	1.5	7/0.53	0.8	1.8	10.2	12.1	143	500
	2.5	7/0.67	0.8	1.8	11.2	7.41	182	500
	4	7/0.85	1.0	1.8	13.2	4.61	261	500
4	0.5	7/0.30	0.8	1.8	9.5	36	111	500
	0.75	7/0.37	0.8	1.8	9.9	24.5	126	500
	1	7/0.43	0.8	1.8	10.4	18.1	145	500
	1.5	7/0.53	0.8	1.8	11.1	12.1	173	500
	2.5	7/0.67	0.8	1.8	12.1	7.41	224	500
	4	7/0.85	1.0	1.8	14.4	4.61	325	500
5	0.5	7/0.30	0.8	1.8	10.3	36	133	500
	0.75	7/0.37	0.8	1.8	10.8	24.5	151	500
	1	7/0.43	0.8	1.8	11.3	18.1	176	500
	1.5	7/0.53	0.8	1.8	12.1	12.1	211	500
	2.5	7/0.67	0.8	1.8	13.2	7.41	274	500
	4	7/0.85	1.0	1.8	15.7	4.61	403	500
6	0.5	7/0.30	0.8	1.8	11.0	36	153	500
	0.75	7/0.37	0.8	1.8	11.6	24.5	175	500
	1	7/0.43	0.8	1.8	12.2	18.1	205	500
	1.5	7/0.53	0.8	1.8	13.0	12.1	247	500
	2.5	7/0.67	0.8	1.8	14.3	7.41	323	500
	4	7/0.85	1.0	1.8	17.1	4.61	533	500
7	0.5	7/0.30	0.8	1.8	11.0	36	78	500
	0.75	7/0.37	0.8	1.8	11.6	21.5	82	500
	1	7/0.43	0.8	1.8	12.2	18.1	87	500
	1.5	7/0.53	0.8	1.8	13.0	12.1	94	500
	2.5	7/0.67	0.8	1.8	14.4	7.41	106	500
	4	7/0.85	1.0	1.8	17.2	4.61	129	500

D : Packing in drum.
Note: We reserve the right to alter this specification without notice.

No of core	Conductor		Insulation thickness	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size mm^2	No. & dia. of wires No./mm.	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
8	0.5	7/0.30	0.8	1.8	11.8	36	84	500
	0.75	7/0.37	0.8	1.8	12.4	24.5	89	500
	1	7/0.43	0.8	1.8	13.1	18.1	95	500
	1.5	7/0.53	0.8	1.8	14.1	12.1	103	500
	2.5	7/0.67	0.8	1.8	15.5	7.41	115	500
	4	7/0.85	1.0	1.8	18.6	4.61	141	500
9	0.5	7/0.30	0.8	1.8	12.5	36	90	500
	0.75	7/0.37	0.8	1.8	13.2	24.5	96	500
	1	7/0.43	0.8	1.8	14.1	18.1	100	500
	1.5	7/0.83	0.8	1.8	15.0	12.1	111	500
	2.5	7/0.57	0.8	1.8	18.6	7.41	124	500
	4	7/0.85	1.0	1.8	19.9	4.61	152	500
10	0.5	7/0.30	0.8	1.8	13.5	36	98	500
	0.75	7/0.37	0.8	1.8	14.3	24.5	105	500
	1	7/0.43	0.8	1.8	15.2	18.1	112	500
	1.5	7/0.53	0.8	1.8	16.2	12.1	121	500
	2.5	7/0.87	0.8	1.8	17.9	7.41	509	500
	4	7/0.85	1.0	1.8	21.7	4.61	765	500
11	0.5	7/0.30	0.8	1.8	13.5	36	238	500
	0.75	7/0.37	0.8	1.8	14.3	24.5	280	500
	1	7/0.43	0.8	1.8	15.2	18.1	331	500
	1.5	7/0.53	0.8	1.8	16.2	12.1	406	500
	2.5	7/0.67	0.8	1.8	17.9	7.41	541	500
	4	7/0.85	1.0	1.8	21.7	4.61	817	500
12	0.5	7/0.30	0.8	1.8	14.0	36	255	500
	0.75	7/0.37	0.8	1.8	14.7	24.5	298	500
	1	7/0.43	0.8	1.8	15.8	18.1	353	500
	1.5	7/0.53	0.8	1.8	16.7	12.1	434	500
	2.5	7/0.67	0.8	1.8	18.5	7.41	580	500
	4	7/0.85	1.0	1.8	22.4	4.61	878	500
13	0.5	7/0.30	0.8	1.8	14.5	38	260	500
	0.75	7/0.37	0.8	1.8	15.4	24.5	304	500
	1	7/.43	0.8	1.8	16.3	18.1	381	500
	1.5	7/0.53	0.8	1.8	17.5	12.1	445	500
	2.5	7/0.67	0.8	1.8	19.4	7.41	597	500
	4	7/0.85	1.0	1.8	25.5	4.61	902	500

D : Packing in drum.
Note: We reserve the right to alter this specification without notice.

No of core	Conductor		Insulation thickness	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size mm^2	No. & dia. of wires No./mm.	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
20	0.5	7/0.30	0.8	1.8	18.8	36	359	500
	0.75	7/0.37	0.8	1.8	17.8	24.5	424	500
	1	7/0.43	0.8	1.8	18.9	18.1	510	500
	1.5	7/0.53	0.8	1.8	20.3	12.1	653	500
	2.5	7/0.67	0.8	1.8	22.5	7.41	564	500
	4	7/0.85	1.0	1.9	27.6	4.81	1328	500
21	0.5	7/0.30	0.8	1.8	15.8	36	389	500
	0.75	7/0.37	0.8	1.8	17.8	24.5	459	500
	1	7/0.43	0.8	1.8	18.9	18.1	552	500
	1.5	7/0.53	0.8	1.8	20.3	12.1	688	500
	2.5	7/0.57	0.8	1.8	22.5	7.47	938	500
	4	7/0.85	1.0	27.8	4.61	4.61	1443	500
22	0.5	7/0.30	0.8	1.8	17.8	36	399	500
	0.75	7/0.37	0.8	1.8	18.8	24.5	472	500
	1	7/0.43	0.8	1.8	19.8	18.1	588	500
	1.5	7/0.53	0.8	1.8	21.3	12.1	708	500
	2.5	7/0.67	0.8	1.8	23.6	7.41	965	500
	4	7/0.85	1.0	1.8	29.1	4.61	1493	500
23	0.5	7/0.30	0.8	1.8	17.6	36	413	500
	0.75	7/0.37	0.8	1.8	18.6	24.5	489	500
	1	7/0.43	0.8	1.8	19.8	18.1	589	500
	1.5	7/0.53	0.8	1.8	21.3	12.1	736	500
	2.5	7/0.67	0.8	1.8	23.6	7.41	1004	500
	4	7/0.85	1.0	1.9	29.1	4.61	1556	500
24	0.5	7/0.30	0.8	1.8	18.5	36	433	500
	0.75	7/0.37	0.8	1.8	19.6	24.5	512	500
	1	7/0.43	0.8	1.8	20.9	18.1	617	500
	1.5	7/0.53	0.8	1.8	22.5	12.1	770	500
	2.5	7/0.67	0.8	1.8	25.0	7.41	1050	500
	4	7/0.85	1.0	2.0	30.9	4.61	1633	500
25	0.5	7/0.30	0.8	1.8	18.5	36	443	500
	0.75	7/0.37	0.8	1.8	19.6	24.5	526	500
	1	7/0.43	0.8	1.8	20.9	18.1	634	500
	1.6	7/0.53	0.8	1.8	22.5	12.1	792	500
	2.5	7/0.67	0.8	1.8	25.0	7.41	1082	500
	4	7/0.85	1.0	2.0	30.9	4.61	1685	500

D : Packing in drum.
Note: We reserve the right to alter this specification without notice.

No of core	Conductor		Insulation thickness	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size mm^2	No. & dia. of wires No./mm.	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
20	0.5	7/0.30	0.8	1.8	18.8	36	359	500
	0.75	7/0.37	0.8	1.8	17.8	24.5	424	500
	1	7/0.43	0.8	1.8	18.9	18.1	510	500
	1.5	7/0.53	0.8	1.8	20.3	12.1	653	500
	2.5	7/0.67	0.8	1.8	22.5	7.41	564	500
	4	7/0.85	1.0	1.9	27.6	4.81	1328	500
21	0.5	7/0.30	0.8	1.8	15.8	36	389	500
	0.75	7/0.37	0.8	1.8	17.8	24.5	459	500
	1	7/0.43	0.8	1.8	18.9	18.1	552	500
	1.5	7/0.53	0.8	1.8	20.3	12.1	688	500
	2.5	7/0.57	0.8	1.8	22.5	7.47	938	500
	4	7/0.85	1.0	27.8	4.61	4.61	1443	500
22	0.5	7/0.30	0.8	1.8	17.8	36	399	500
	0.75	7/0.37	0.8	1.8	18.8	24.5	472	500
	1	7/0.43	0.8	1.8	19.8	18.1	588	500
	1.5	7/0.53	0.8	1.8	21.3	12.1	708	500
	2.5	7/0.67	0.8	1.8	23.6	7.41	965	500
	4	7/0.85	1.0	1.8	29.1	4.61	1493	500
23	0.5	7/0.30	0.8	1.8	17.6	36	413	500
	0.75	7/0.37	0.8	1.8	18.6	24.5	489	500
	1	7/0.43	0.8	1.8	19.8	18.1	589	500
	1.5	7/0.53	0.8	1.8	21.3	12.1	736	500
	2.5	7/0.67	0.8	1.8	23.6	7.41	1004	500
	4	7/0.85	1.0	1.9	29.1	4.61	1556	500
24	0.5	7/0.30	0.8	1.8	18.5	36	433	500
	0.75	7/0.37	0.8	1.8	19.6	24.5	512	500
	1	7/0.43	0.8	1.8	20.9	18.1	617	500
	1.5	7/0.53	0.8	1.8	22.5	12.1	770	500
	2.5	7/0.67	0.8	1.8	25.0	7.41	1050	500
	4	7/0.85	1.0	2.0	30.9	4.61	1633	500
25	0.5	7/0.30	0.8	1.8	18.5	36	443	500
	0.75	7/0.37	0.8	1.8	19.6	24.5	526	500
	1	7/0.43	0.8	1.8	20.9	18.1	634	500
	1.6	7/0.53	0.8	1.8	22.5	12.1	792	500
	2.5	7/0.67	0.8	1.8	25.0	7.41	1082	500
	4	7/0.85	1.0	2.0	30.9	4.61	1685	500

D : Packing in drum.
Note: We reserve the right to alter this specification without notice.

CVV

600 V 70°C PVC INSULATED AND SHEATHED CONTROL CABLE

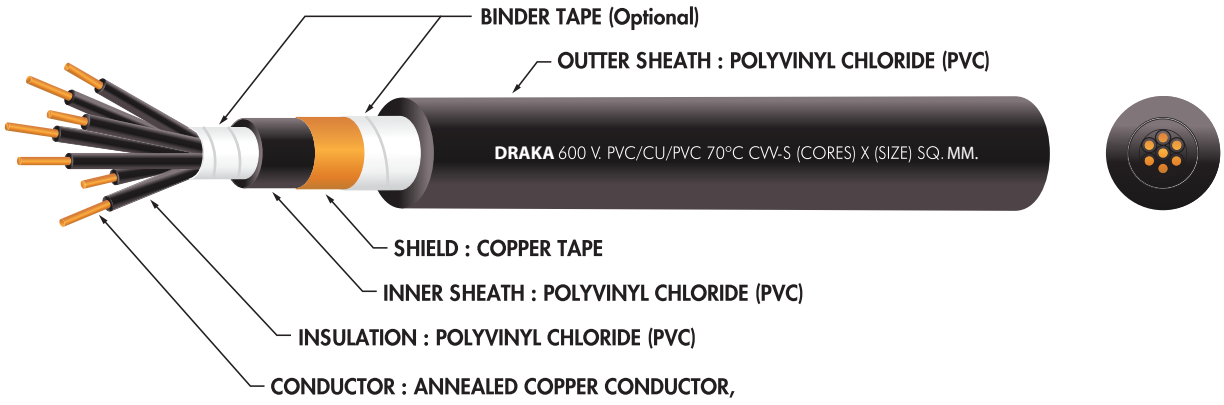
No of core	Conductor		Insulation thickness	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size mm^2	No. & dia. of wires No./mm.	mm. (Nominal)	mm. (Nominal)	mm. (Approx.)	Ω/km (Max.)	kg/km (Approx.)	m/Drum (Approx.)
26	0.5	7/0.30	0.8	1.8	18.5	36	455	500
	0.75	7/0.37	0.8	1.8	19.6	24.5	540	500
	1	7/0.43	0.8	1.8	20.9	18.1	652	500
	1.5	7/0.53	0.8	1.8	22.5	12.1	816	500
	2.5	7/0.67	0.8	1.8	25.0	7.41	195	500
	4	7/0.85	1.0	2.0	30.9	4.81	264	500
27	0.5	7/0..30	0.8	1.8	18.9	36	144	500
	0.75	7/0.37	0.8	1.8	20.0	24.5	153	500
	1	7/0.43	0.8	1.8	21.3	18.1	184	500
	1.5	7/0.53	0.8	1.8	23.0	12.1	178	500
	2.5	7/0.67	0.8	1.8	25.5	7.41	199	500
	4	7/0.85	1.0	2.0	31.7	4.61	278	500
28	0.5	7/0.30	0.8	1.8	18.9	36	144	500
	0.75	7/0.37	0.8	1.8	20.0	24.5	153	500
	1	7/0.43	0.8	1.8	21.3	18.1	164	500
	1.5	7/0.53	0.8	1.8	23.0	12.1	178	500
	2.5	7/0.57	0.8	1.8	25.6	7.41	200	500
	4	7/0.85	1.0	2.0	31.8	4.61	276	500
29	0.6	7/0.30	0.8	1.8	19.5	36	149	500
	0.75	7/0.37	0.8	1.8	20.7	24.5	159	500
	1	7/0.43	0.8	1.8	22.0	18.1	170	500
	1.5	7/0.53	0.8	1.8	23.8	12.1	184	500
	2.5	7/0.67	0.8	1.8	26.5	7.41	207	500
	4	7/0.85	1.0	2.0	32.9	4.81	290	500
30	0.5	7/0.30	0.8	1.8	19.5	36	149	500
	0.75	7/0.37	0.8	1.8	22.0	18.1	170	500
	1	7/0.43	0.8	1.8	22.0	18.1	170	500
	1.5	7/0.53	0.8	1.8	23.8	12.1	184	500
	2.5	7/0.67	0.8	1.8	26.5	7.41	207	500
	4	7/0.85	1.0	2.0	32.9	4.61	290	500

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV - S

600 V 70°C PVC INSULATED AND SHEATHED, COPPER TAPE SHIELDED



Application : Supervisory electrical equipment, and instruments, particularly in and around process plants, where transducer generated circuits panels, controller and associated devices.

Classification : Maximum conductor temperature 70°C
Rated circuit voltage 600 volts.

Testing voltage : 3,500 volts.

Standard : IEC 60502

Optional : Filler
Binder tape

Construction :
- Number of core : 2 cores to 30 cores
- Conductor : Annealed copper conductor (Optional : Solid or Flexible or Concentric stranded.)
- Insulation : Polyvinyl chloride (PVC) Colour : 2-4 cores : Red, Yellow Blue, Black. more than 4 cores : Black colour with marking core numbers.
- Inner Sheath : Polyvinyl chloride (PVC) Black Colour.
- Shield : Copper Tape
- Outter Sheath : Polyvinyl chloride (PVC) Black Colour.

Note: We reserve the right to alter this specification without notice.

CVV - S

600 V 70°C PVC INSULATED AND SHEATHED, COPPER TAPE SHIELDED

PRYSMIAN Draka

Number of core	Nominal cross sectional area (mm^2)	Number and diameter of (No/mm.)	Insulation thickness (mm)	Bedding thickness (mm)	Coppers tape thickness (mm)	Sheath thickness (mm)	Overall diameter (approx.) (mm)	Cables weight (approx.) (kg/km)	Standard length (m)
2	0.5	7/0.30	0.8	1.0	0.1	1.8	11.4	176	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	11.7	191	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	12.1	205	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	12.7	231	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	13.5	272	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	15.4	360	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	16.5	131	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	18.4	572	500/D
3	0.5	7/0.30	0.8	1.0	0.1	1.8	11.7	192	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	12.2	211	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	12.5	228	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	13.2	251	500/D
	2.5	7/0.69	0.8	1.0	0.1	1.8	14.1	312	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	16.1	421	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	17.3	516	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	19.3	697	500/D
4	0.5	7/0.30	0.8	1.0	0.1	1.8	12.4	215	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	12.9	238	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	13.3	259	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	14.0	299	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	15.0	363	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	17.3	497	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	18.7	616	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	20.9	845	500/D
5	0.5	7/0.30	0.8	1.0	0.1	1.8	13.2	237	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	13.7	263	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	14.2	287	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	15.0	334	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	16.1	408	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	18.7	560	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	20.2	699	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	22.7	967	500/D
6	0.5	7/0.30	0.8	1.0	0.1	1.8	14.0	265	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	14.6	295	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	15.1	324	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	16.0	379	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	17.2	468	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	20.0	649	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	21.7	815	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	24.5	1137	500/D
7	0.5	7/0.30	0.8	1.0	0.1	1.8	14.0	271	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	14.6	304	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	15.1	335	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	16.0	395	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	17.2	491	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	20.0	686	500/D
	5	7/1.04	1.0	1.0	0.1	1.8	21.7	669	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	24.5	1225	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV - S

600 V 70°C PVC INSULATED AND SHEATHED, COPPER TAPE SHIELDED

Number of core	Nominal cross sectional area (mm^2)	Number and diameter of (No/mm.)	Insulation thickness (mm)	Bedding thickness (mm)	Coppers tape thickness (mm)	Sheath thickness (mm)	Overall diameter (approx.) (mm)	Cables weight (approx.) (kg/km)	Standard length (m)
8	0.5	7/0.30	0.8	1.0	0.1	1.8	14.7	301	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	15.4	339	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	15.9	375	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	16.9	444	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	18.3	556	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	21.4	783	500/D
	6	7/1.04	10.0	1.0	0.1	1.8	23.3	995	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	26.4	1407	500/D
9	0.5	7/0.30	0.8	1.0	0.1	1.8	15.5	333	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	16.2	377	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	16.8	418	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	17.9	497	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	19.4	624	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	22.8	885	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	24.9	1127	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	28.2	1600	500/D
10	0.5	7/0.30	0.8	1.0	0.1	1.8	16.5	385	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	17.3	413	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	17.9	459	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	19.1	547	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	20.8	689	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	24.6	980	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	28.9	1260	500/D
	10	7/1.35	1.0	1.0	0.1	1.9	30.8	1790	500/D
11	0.5	7/0.30	0.8	1.0	0.1	1.8	16.5	377	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	17.3	429	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	17.9	477	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	19.1	572	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	20.6	724	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	24.6	1038	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	26.9	1328	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	30.8	1912	500/D
12	0.5	7/0.30	0.8	1.0	0.1	1.8	16.9	398	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	17.7	450	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	18.4	477	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	19.5	502	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	21.4	603	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	25.3	767	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	27.7	1101	500/D
	10	7/1.35	1.0	1.0	0.1	1.8	32.3	1415	500/D
13	0.5	7/0.30	0.8	1.0	0.1	1.8	17.6	405	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	18.4	462	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	19.1	517	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	20.5	622	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	22.3	792	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	26.5	1135	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	29.0	1463	500/D
	10	7/1.35	1.0	1.2	0.1	2.0	33.9	2167	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV - S

600 V 70°C PVC INSULATED AND SHEATHED, COPPER TAPE SHIELDED

PRYSMIAN Draka

Number of core	Nominal cross sectional area (mm^2)	Number and diameter of (No/mm.)	Insulation thickness (mm)	Bedding thickness (mm)	Coppers tape thickness (mm)	Sheath thickness (mm)	Overall diameter (approx.) (mm)	Cables weight (approx.) (kg/km)	Standard length (m)
14	0.5	7/0.30	0.8	1.0	0.1	1.8	17.6	417	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	18.4	478	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	19.2	535	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	20.5	647	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	22.3	827	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	26.5	1192	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	29.0	1542	500/D
	10	7/1.35	1.0	1.2	0.1	2.0	33.9	2289	500/D
15	0.5	7/0.30	0.8	1.0	0.1	1.8	17.9	438	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	18.6	503	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	19.5	564	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	20.9	683	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	22.8	877	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	27.1	1268	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	29.9	1857	500/D
	10	7/1.35	1.0	1.2	0.1	2.0	34.7	2444	500/D
16	0.5	7/0.30	0.8	1.0	0.1	1.8	18.3	456	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	19.2	525	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	20.0	590	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	21.4	717	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	23.4	922	500/D
	4	7/0.85	1.0	1.0	0.1	1.8	27.6	1336	500/D
	6	7/1.04	1.0	1.0	0.1	1.8	30.5	1749	500/D
	10	7/1.35	1.0	1.2	0.1	2.0	35.6	2563	500/D
17	0.5	7/0.30	0.8	1.0	0.1	1.8	19.0	484	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	20.0	558	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	20.8	628	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	22.3	762	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	24.4	982	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	29.3	1439	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	32.8	1912	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	37.8	2790	500/D
18	0.5	7/0.30	0.8	1.0	0.1	1.8	19.0	490	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	20.0	566	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	20.4	638	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	22.3	778	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	24.4	1005	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	29.3	1476	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	32.8	1965	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	37.8	2878	500/D
19	0.5	7/0.30	0.8	1.0	0.1	1.8	19.0	502	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	20.0	581	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	20.4	657	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	22.3	802	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	24.4	1040	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	29.3	1532	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	32.8	2043	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	37.8	3000	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

Number of core	Nominal cross sectional area (mm^2)	Number and diameter of (No/mm.)	Insulation thickness (mm)	Bedding thickness (mm)	Coppers tape thickness (mm)	Sheath thickness (mm)	Overall diameter (approx.) (mm)	Cables weight (approx.) (kg/km)	Standard length (m)
20	0.5	7/0.30	0.8	1.0	0.1	1.8	19.8	528	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	20.8	611	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	21.7	690	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	23.3	844	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	25.5	1095	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	30.7	1613	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	34.3	2151	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	39.7	3159	500/D
21	0.5	7/0.30	0.8	1.0	0.1	1.8	19.8	544	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	20.8	632	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	21.7	715	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	23.3	877	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	25.5	1140	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	30.7	1685	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	34.3	2250	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	39.7	3309	500/D
22	0.5	7/0.30	0.8	1.0	0.1	1.8	20.6	577	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	21.7	670	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	22.6	758	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	24.3	929	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	26.6	1208	500/D
	4	7/0.85	1.0	1.0	0.1	1.9	32.1	1707	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	35.9	2385	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	41.5	3506	500/D
23	0.5	7/0.30	0.8	1.0	0.1	1.8	20.6	591	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	21.7	687	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	22.6	779	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	24.3	957	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.8	26.6	1248	500/D
	4	7/0.85	1.0	1.2	0.1	1.9	32.1	1882	500/D
	6	7/1.04	1.0	1.2	0.1	2.0	35.9	2473	500/D
	10	7/1.35	1.0	1.2	0.1	2.2	41.5	3642	500/D
24	0.5	7/0.30	0.8	1.0	0.1	1.8	21.6	620	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	22.7	721	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	23.7	817	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	25.5	1004	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	28.2	1321	500/D
	4	7/0.85	1.0	1.2	0.1	2.0	34.5	1987	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	38.3	2624	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	44.7	3893	500/D
26	0.5	7/0.30	0.8	1.0	0.1	1.8	21.6	643	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	22.7	750	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	23.7	853	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	25.5	1051	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	28.2	1389	500/D
	4	7/0.85	1.0	1.2	0.1	2.1	34.7	2111	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	38.3	2775	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	44.7	4130	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV - S

600 V 70°C PVC INSULATED AND SHEATHED, COPPER TAPE SHIELDED

PRYSMIAN Draka

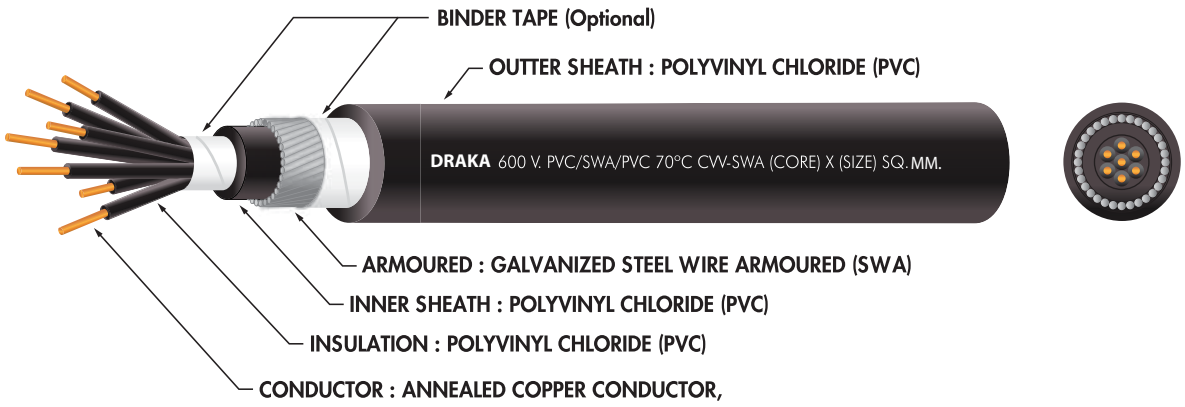
Number of core	Nominal cross sectional area (mm^2)	Number and diameter of (No/mm.)	Insulation thickness (mm)	Bedding thickness (mm)	Coppers tape thickness (mm)	Sheath thickness (mm)	Overall diameter (approx.) (mm)	Cables weight (approx.) (kg/km)	Standard length (m)
27	0.5	7/0.30	0.8	1.0	0.1	1.8	22.0	662	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	23.2	773	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	24.2	879	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	26.0	1065	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	28.8	1434	500/D
	4	7/0.85	1.0	1.2	0.1	2.1	35.4	2181	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	39.1	2869	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	45.6	4273	500/D
28	0.5	7/0.30	0.8	1.0	0.1	1.8	22.0	674	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	23.2	788	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	24.2	898	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	26.0	1110	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	28.8	1470	500/D
	4	7/0.85	1.0	1.2	0.1	2.1	35.4	2238	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	39.1	2948	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	45.7	4395	500/D
29	0.5	7/0.30	0.8	1.0	0.1	1.8	22.6	684	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	23.9	800	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	24.9	912	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	26.8	1128	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	29.7	1495	500/D
	4	7/0.85	1.0	1.2	0.1	2.1	36.6	2275	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	40.4	2998	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	47.2	4476	500/D
30	0.5	7/0.30	0.8	1.0	0.1	1.8	22.6	696	500/D
	0.75	7/0.37	0.8	1.0	0.1	1.8	23.9	818	500/D
	1	7/0.43	0.8	1.0	0.1	1.8	24.9	922	500/D
	1.5	7/0.53	0.8	1.0	0.1	1.8	26.8	1152	500/D
	2.5	7/0.67	0.8	1.0	0.1	1.9	29.7	1530	500/D
	4	7/0.85	1.0	1.2	0.1	2.1	36.6	2331	500/D
	6	7/1.04	1.0	1.2	0.1	2.2	40.4	3076	500/D
	10	7/1.35	1.0	1.4	0.1	2.4	47.2	4598	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

CVV - SWA

600 V 70°C PVC INSULATED AND SHEATHED, ARMOURED TYPE



Application : Supervisory electrical equipment, and instruments, particularly in and around process plants, where transducer generated signals are transmitted through marshalled circuits panels, controller and associated devices.

Classification : Maximum conductor temperature 70°C
Rated circuit voltage 600 volts.

Testing voltage : 3,500 volts.

Standard : IEC 60502

Optional : Filler
Binder tape

Construction :

Number of core	:	2 cores to 30 cores
Conductor	:	Annealed copper conductor, (Optional : Solid or Flexible or Concentric stranded.)
Insulation	:	Polyvinyl chloride (PVC) Colour : 2-4 cores : Red, Yellow Blue, Black. more than 4 cores : Black colour with marking core numbers.
Inner Sheath	:	Polyvinyl chloride (PVC) Black Colour.
Armoured	:	Galvanized Steel Wire Armounred (SWA)
Outter Sheath	:	Polyvinyl chloride (PVC) Black Colour.

Note: We reserve the right to alter this specification without notice.

CVV - SWA

600 V 70°C PVC INSULATED AND SHEATHED, ARMOURED TYPE

PRYSMIAN Draka

No. of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & dia armour wire	Overall diameter after armoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No.& dia. of wires	mm.	mm.	mm.	No./mm	mm.	mm.	mm.	Ω/km	kg / km	m/Drum
	mm^2	No./mm	(Nominal)	(Nominal)	(Approx.)	(Approx.)	(Approx.)	(Nominal)	(Approx.)	(Max.)	(Approx.)	(Approx.)
2	0.5	7/0.30	0.8	1.0	7	26/0.9	9	1.8	12.2	36	282	500
	0.75	7/0.37	0.8	1.0	7	27/0.9	9	1.8	12.6	24.5	301	500
	1	7/0.43	0.8	1.0	8	29/0.9	9	1.8	13.0	18.1	324	500
	1.5	7/0.53	0.8	1.0	8	31/0.9	10	1.8	13.6	12.1	354	500
	2.5	7/0.67	0.8	1.0	9	34/0.9	11	1.8	14.4	7.41	406	500
	4	7/0.85	1.0	1.0	11	30/1.25	13	1.8	17.0	4.61	611	500
3	0.5	7/0.30	0.8	1.0	7	27/0.9	9	1.8	12.6	36	306	500
	0.75	7/0.37	0.8	1.0	8	29/0.9	9	1.8	13.0	24.5	328	500
	1	7/0.43	0.8	1.0	8	30/0.9	10	1.8	13.5	18.1	355	500
	1.5	7/0.53	0.8	1.0	9	32/0.9	10	1.8	14.0	12.1	393	500
	2.5	7/0.67	0.8	1.0	10	36/0.9	11	1.8	14.9	7.41	458	500
	4	7/0.85	1.0	1.0	12	37/1.25	14	1.8	17.7	4.61	692	500
4	0.5	7/0.30	0.8	1.0	8	30/0.9	10	1.8	13.2	36	334	500
	0.75	7/0.37	0.8	1.0	8	31/0.9	10	1.8	13.7	24.5	360	500
	1	7/0.43	0.8	1.0	9	33/0.9	11	1.8	14.2	18.1	393	500
	1.5	7/0.53	0.8	1.0	9	26/1.25	12	1.8	15.6	12.1	519	500
	2.5	7/0.67	0.8	1.0	11	29/1.25	13	1.8	16.6	7.41	603	500
	4	7/0.85	1.0	1.0	13	34/1.25	15	1.8	18.8	4.61	782	500
5	0.5	7/0.30	0.8	1.0	9	33/0.9	10	1.8	14.1	36	365	500
	0.75	7/0.37	0.8	1.0	9	34/0.9	11	1.8	14.5	24.5	395	500
	1	7/0.43	0.8	1.0	10	38/0.9	12	1.8	15.1	18.1	432	500
	1.5	7/0.53	0.8	1.0	10	28/1.25	13	1.8	16.5	12.1	571	500
	2.5	7/0.67	0.8	1.0	12	31/1.25	14	1.8	17.7	7.41	668	500
	4	7/0.85	1.0	1.0	14	371.25	17	1.8	20.2	4.61	862	500
6	0.5	7/0.30	0.8	1.0	9	35/00.9	11	1.8	14.8	36	402	500
	0.75	7/0.37	0.8	1.0	10	27/1.25	12	1.8	26.0	24.5	522	500
	1	7/0.43	0.8	1.0	11	29/1.25	13	1.8	16.7	18.1	569	500
	1.5	7/0.53	0.8	1.0	11	31/1.25	14	1.8	17.5	12.1	635	500
	2.5	7/0.67	0.8	1.0	13	34/1.25	15	1.8	18.7	7.41	748	500
	4	7/0.85	1.0	1.0	15	32/1.60	19	1.8	22.3	4.61	1155	500
7	0.5	7/0.30	0.8	1.0	9	35/0.9	11	1.8	14.8	36	408	500
	0.75	7/0.37	0.8	1.0	10	27/1.25	12	1.8	16.0	24.5	529	500
	1	7/0.43	0.8	1.0	11	29/1.25	13	1.8	16.7	18.1	579	500
	1.5	7/0.53	0.8	1.0	11	31/1.25	14	1.8	17.5	12.1	650	500
	2.5	7/0.67	0.8	1.0	13	34/1.25	15	1.8	18.6	7.41	776	500
	4	7/0.85	1.0	1.0	16	32/1.60	19	1.8	22.4	4.61	1143	500
8	0.5	7/0.30	0.8	1.0	10	28/1.25	13	1.8	16.2	36	533	500
	0.75	7/0.37	0.8	1.0	11	29/1.25	13	1.8	16.8	24.5	579	500
	1	7/0.43	0.8	1.0	11	31/1.25	14	1.8	17.5	18.1	637	500
	1.5	7/0.53	0.8	1.0	12	34/1.25	15	1.8	18.5	12.1	723	500
	2.5	7/0.67	0.8	1.0	14	37/1.25	16	1.8	19.9	7.41	861	500
	4	7/0.85	1.0	1.0	17	35/1.60	20	1.8	23.7	4.61	1273	500
9	0.5	7/0.30	0.8	1.0	11	30/1.25	13	1.8	17.0	36	580	500
	0.75	7/0.37	0.8	1.0	12	31/1.25	14	1.8	17.7	24.5	631	500
	1	7/0.43	0.8	1.0	12	33/1.25	15	1.8	18.5	18.1	702	500
	1.5	7/0.53	0.8	1.0	13	36/1.25	16	1.8	19.5	12.1	793	500
	2.5	7/0.67	0.8	1.0	15	40/1.25	17	1.8	21.0	7.41	950	500
	4	7/0.85	1.0	1.0	18	37/1.60	22	1.8	25.1	4.61	1408	500

Note: We reserve the right to alter this specification without notice.

No. of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & dia armour wire	Overall diameter after armoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No.& dia. of wires	mm.	mm.	mm.	No./mm	mm.	mm.	mm.	Ω/km	kg / km	m/Drum
	mm^2	No./mm	(Nominal)	(Nominal)	(Approx.)	(Approx.)	(Approx.)	(Nominal)	(Approx.)	(Max.)	(Approx.)	(Approx.)
10	0.5	7/0.30	0.8	1.0	12	32/1.25	14	1.8	18.0	36	629	500
	0.75	7/0.37	0.8	1.0	13	34/1.25	15	1.8	18.8	24.5	693	500
	1	7/0.43	0.8	1.0	14	35/1.25	16	1.8	19.6	18.1	757	500
	1.5	7/0.53	0.8	1.0	15	39/1.25	17	1.8	20.7	12.1	866	500
	2.5	7/0.67	0.8	1.0	16	33/1.60	20	1.8	23.1	7.41	1160	500
	4	7/0.85	1.0	1.0	20	40/1.60	23	1.8	26.8	4.61	1546	500
11	0.5	7/0.30	0.8	1.0	12	32/1.25	14	1.8	18.0	36	640	500
	0.75	7/0.37	0.8	1.0	13	34/1.25	15	1.8	18.8	24.5	706	500
	1	7/0.43	0.8	1.0	14	36/1.25	16	1.8	19.6	18.1	782	500
	1.5	7/0.53	0.8	1.0	15	39/1.25	17	1.8	20.7	12.1	888	500
	2.5	7/0.67	0.8	1.0	16	33/1.60	20	1.8	23.1	7.41	1192	500
	4	7/0.85	1.0	1.0	20	40/1.60	23	1.8	26.8	4.61	1597	500
12	0.5	7/0.30	0.8	1.0	12	33/1.25	15	1.8	18.4	36	671	500
	0.75	7/0.37	0.8	1.0	13	35/1.25	16	1.8	19.2	24.5	736	500
	1	7/0.43	0.8	1.0	14	37/1.25	17	1.8	20.1	18.1	817	500
	1.5	7/0.53	0.8	1.0	15	40/1.25	18	1.8	21.2	12.1	930	500
	2.5	7/0.67	0.8	1.0	17	34/1.60	20	1.8	23.6	7.41	1250	500
	4	7/0.85	1.0	1.0	21	42/1.60	24	1.8	27.5	4.61	1682	500
13	0.5	7/0.30	0.8	1.0	13	35/1.25	16	1.8	19.1	36	695	500
	0.75	7/0.37	0.8	1.0	14	29/1.60	17	1.8	20.6	24.5	888	500
	1	7/0.43	0.8	1.0	15	30/1.80	18	1.8	21.5	18.1	957	500
	1.5	7/0.53	0.8	1.0	16	33/1.60	19	1.8	22.7	12.1	1082	500
	2.5	7/0.67	0.8	1.0	18	36/1.60	21	1.8	24.6	7.41	1298	500
	4	7/0.85	1.0	1.0	22	44/1.60	25	1.9	28.9	4.61	1760	500
14	0.5	7/0.30	0.8	1.0	13	35/1.25	16	1.8	19.1	36	707	500
	0.75	7/0.37	0.8	1.0	14	37/1.25	16	1.8	19.9	24.5	776	500
	1	7/0.43	0.8	1.0	15	39/1.25	1725	1.8	20.8	18.1	865	500
	1.5	7/0.53	0.8	1.0	16	33/1.60	19	1.8	22.7	12.1	1106	500
	2.5	7/0.67	0.8	1.0	18	36/1.60	21	1.8	24.8	7.41	1333	500
	4	7/0.85	1.0	1.0	22	44/1.60	25	1.9	28.9	4.61	1816	500
15	0.5	7/0.30	0.8	1.0	13	36/1.25	16	1.8	19.4	36	733	500
	0.75	7/0.37	0.8	1.0	14	38/1.25	17	1.8	20.2	24.5	807	500
	1	7/0.43	0.8	1.0	15	40/1.25	18	1.8	21.2	18.1	901	500
	1.5	7/0.53	0.8	1.0	16	34/1.60	20	1.8	23.1	12.1	1152	500
	2.5	7/0.67	0.8	1.0	18	37/1.60	21	1.8	25.0	7.41	1394	500
	4	7/0.85	1.0	1.0	23	45/1.60	26	1.9	29.5	4.61	1906	500
16	0.5	7/0.30	0.8	1.0	14	37/1.25	16	1.8	19.8	36	770	500
	0.75	7/0.37	0.8	1.0	15	39/1.25	17	1.8	20.6	24.5	850	500
	1	7/0.43	0.8	1.0	16	32/1.60	19	1.8	22.3	18.1	1056	500
	1.5	7/0.53	0.8	1.0	17	34/1.60	20	1.8	23.6	12.1	1215	500
	2.5	7/0.67	0.8	1.0	19	38/1.60	22	1.8	25.6	7.41	1475	500
	4	7/0.85	1.0	1.0	23	46/1.60	26	1.9	30.2	4.61	2033	500
17	0.5	7/0.30	0.8	1.0	14	38/1.25	17	1.8	20.5	36	815	500
	0.75	7/0.37	0.8	1.0	15	32/1.60	19	1.8	22.1	24.5	1014	500
	1	7/0.43	0.8	1.0	16	34/1.60	20	1.8	23.2	18.1	1128	500
	1.5	7/0.53	0.8	1.0	18	36/1.60	21	1.8	24.5	12.1	1288	500
	2.5	7/0.67	0.8	1.0	20	40/1.60	23	1.8	26.6	7.41	1566	500
	4	7/0.85	1.0	1.0	25	49/1.60	28	2.0	31.7	4.61	2171	500

Note: We reserve the right to alter this specification without notice.

CVV - SWA

600 V 70°C PVC INSULATED AND SHEATHED, ARMOURED TYPE

PRYSMIAN Draka

No. of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & dia armour wire	Overall diameter after armoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No.& dia. of wires	mm.	mm.	mm.	No./mm	mm.	mm.	mm.	Ω/km	kg / km	m/Drum
	mm^2	No./mm	(Nominal)	(Nominal)	(Approx.)	(Approx.)	(Approx.)	(Nominal)	(Approx.)	(Max.)	(Approx.)	(Approx.)
18	0.5	7/0.30	0.8	1.0	14	38/1.25	17	1.8	20.5	36	807	500
	0.75	7/0.37	0.8	1.0	15	32/1.60	19	1.8	22.1	24.5	1006	500
	1	7/0.43	0.8	1.0	16	34/1.60	20	1.8	23.2	18.1	1120	500
	1.5	7/0.53	0.8	1.0	18	36/1.60	21	1.8	23.2	18.1	1120	500
	2.5	7/0.67	0.8	1.0	20	40/1.60	23	1.8	26.6	7.41	1559	500
	4	7/0.85	1.0	1.0	25	49/1.60	28	2.0	31.7	4.61	2160	500
19	0.5	7/0.30	0.8	1.0	14	38/1.25	17	1.8	20.5	36	818	500
	0.75	7/0.37	0.8	1.0	15	32/1.60	19	1.8	21.5	24.5	1020	500
	1	7/0.43	0.8	1.0	16	34/1.60	20	1.8	23.2	18.1	1138	500
	1.5	7/0.53	0.8	1.0	18	36/1.60	21	1.8	24.5	12.1	1303	500
	2.5	7/0.67	0.8	1.0	20	40/1.60	23	1.8	26.6	7.41	1593	500
	4	7/0.85	1.0	1.0	25	49/1.60	28	2.0	31.7	4.61	2215	500
20	0.5	7/0.30	0.8	1.0	15	40/1.25	18	1.8	21.3	36	858	500
	0.75	7/0.37	0.8	1.0	16	33/1.60	19	1.8	22.9	24.5	1089	500
	1	7/0.43	0.8	1.0	17	35/1.60	2	1.8	24.0	18.1	1193	500
	1.5	7/0.53	0.8	1.0	19	38/1.60	22	1.8	25.5	12.1	1368	500
	2.5	7/0.67	0.8	1.0	21	42/1.60	24	1.8	27.7	7.41	1674	500
	4	7/0.85	1.0	1.0	28	42/2.00	30	2.0	34.0	4.61	2570	500
21	0.5	7/0.30	0.8	1.0	15	40/1.25	18	1.8	21.3	36	888	500
	0.75	7/0.37	0.8	1.0	16	33/1.60	19	1.8	22.9	24.5	1105	500
	1	7/0.43	0.8	1.0	17	35/1.60	20	1.8	24.0	18.1	1236	500
	1.5	7/0.53	0.8	1.0	19	38/1.60	22	1.8	25.5	12.1	1421	500
	2.5	7/0.67	0.8	1.0	21	42/1.60	24	1.8	27.7	7.41	1748	500
	4	7/0.85	1.0	1.0	26	42/2.00	30	2.0	34.0	4.61	2685	500
22	0.5	7/0.30	0.8	1.0	16	33/1.60	19	1.8	22.7	36	1038	500
	0.75	7/0.37	0.8	1.0	17	35/1.60	20	1.8	23.7	24.5	1148	500
	1	7/0.43	0.8	1.0	18	37/1.60	21	1.8	24.9	18.1	1282	500
	1.5	7/0.53	0.8	1.0	20	40/1.60	23	1.8	26.4	12.1	1475	500
	2.5	7/0.67	0.8	1.0	22	44/1.60	25	1.8	28.8	7.41	1812	500
	4	7/0.85	1.0	1.0	27	44/2.00	31	2.1	35.5	4.61	2795	500
23	0.5	7/0.30	0.8	1.0	16	33/1.80	19	1.8	22.7	36	1051	500
	0.75	7/0.37	0.8	1.0	17	35/1.60	20	1.8	23.7	24.5	1163	500
	1	7/0.43	0.8	1.0	18	37/1.60	21	1.8	24.9	18.1	1303	500
	1.5	7/0.53	0.8	1.0	20	40/1.60	23	1.8	26.4	12.1	1502	500
	2.5	7/0.67	0.8	1.0	22	44/1.60	25	1.8	28.8	7.41	1851	500
	4	7/0.85	1.0	1.0	27	44/2.00	31	2.1	35.5	4.61	2858	500
24	0.5	7/0.30	0.8	1.0	17	35/1.60	20	1.8	23.7	36	1104	500
	0.75	7/0.37	0.8	1.0	18	37/1.60	21	1.8	24.8	24.5	1221	500
	1	7/0.43	0.8	1.0	19	39/1.60	22	1.8	26.0	18.1	1369	500
	1.5	7/0.53	0.8	1.0	21	45/1.60	24	1.8	27.6	12.1	1629	500
	2.5	7/0.67	0.8	1.0	23	47/1.60	27	1.8	30.2	7.41	1945	500
	4	7/0.85	1.0	1.0	29	46/2.00	33	2.2	37.3	4.61	3014	500
25	0.5	7/0.30	0.8	1.0	17	35/1.60	20	1.8	23.7	36	1116	500
	0.75	7/0.37	0.8	1.0	18	37/1.60	21	1.8	24.8	24.5	1234	500
	1	7/0.43	0.8	1.0	19	39/1.60	22	1.8	26.0	18.1	1386	500
	1.5	7/0.53	0.8	1.0	21	45/1.60	24	1.8	27.6	12.1	1600	500
	2.5	7/0.67	0.8	1.0	23	47/1.60	27	1.8	30.2	7.41	1977	500
	4	7/0.85	1.0	1.0	29	46/2.00	33	2.2	37.3	4.61	3065	500

Note: We reserve the right to alter this specification without notice.

No. of core	Conductor		Insulation thickness	Bedding thickness	Overall diameter before armoured	No. & dia armour wire	Overall diameter after armoured	Sheath thickness	Overall diameter of cable	Conductor resistance at 20°C	Cable weight	Standard length
	Size	No.& dia. of wires	mm.	mm.	mm.	No./mm	mm.	mm.	mm.	Ω/km	kg / km	m/Drum
	mm^2	No./mm	(Nominal)	(Nominal)	(Approx.)	(Approx.)	(Approx.)	(Nominal)	(Approx.)	(Max.)	(Approx.)	(Approx.)
	0.5	7/0.30	0.8	1.0	17	35/1.60	20	1.8	23.7	36	1126	500
	0.75	7/0.37	0.8	1.0	18	37/1.60	21	1.8	24.8	24.5	1248	500
26	1	7/0.43	0.8	1.0	19	39/1.60	22	1.8	26.0	18.1	1404	500
	1.5	7/0.53	0.8	1.0	21	45/1.60	24	1.8	27.6	12.1	1624	500
	2.5	7/0.67	0.8	1.0	23	47/1.60	27	1.8	30.2	7.41	2011	500
	4	7/0.85	1.0	1.0	29	48/2.00	33	2.2	37.3	4.61	3120	500
	0.5	7/0.30	0.8	1.0	17	35/1.60	21	1.8	24.1	36	1154	500
	0.75	7/0.37	0.8	1.0	18	37/1.60	22	1.8	25.2	24.5	1280	500
27	1	7/0.43	0.8	1.0	19	40/1.60	23	1.8	26.5	18.1	1441	500
	1.5	7/0.53	0.8	1.0	21	43/1.60	26	1.8	28.1	12.1	1669	500
	2.5	7/0.67	0.8	1.0	23	48/1.60	27	1.8	30.7	7.41	2069	500
	4	7/0.85	1.0	1.0	29	47/2.00	34	2.2	38.1	4.61	3216	500
	0.5	7/0.30	0.8	1.0	17	35/1.60	21	1.8	24.1	36	1166	500
	0.75	7/0.37	0.8	1.0	18	37/1.60	22	1.8	25.2	24.5	1296	500
28	1	7/0.43	0.8	1.0	20	40/1.60	23	1.8	26.5	18.1	1460	500
	1.5	7/0.53	0.8	1.0	21	43/1.60	26	1.8	28.2	12.1	1694	500
	2.5	7/0.67	0.8	1.0	24	48/1.60	27	1.8	30.7	7.41	2105	500
	4	7/0.85	1.0	1.0	30	47/2.00	34	2.2	38.1	4.61	3273	500
	0.5	7/0.30	0.8	1.0	18	35/1.60	21	1.8	24.7	36	1192	500
	0.75	7/0.37	0.8	1.0	19	39/1.60	22	1.8	25.9	24.5	1324	500
29	1	7/0.43	0.8	1.0	20	41/1.60	24	1.8	27.2	18.1	1493	500
	1.5	7/0.53	0.8	1.0	22	44/1.60	25	1.8	28.9	12.1	1731	500
	2.5	7/0.67	0.8	1.0	25	49/1.60	28	1.8	31.6	7.41	2152	500
	4	7/0.85	1.0	1.0	31	49/2.00	35	2.2	39.3	4.61	3353	500
	0.5	7/0.30	0.8	1.0	18	36/1.60	21	1.8	24.7	36	1204	500
	0.75	7/0.37	0.8	1.0	19	39/1.60	22	1.8	25.9	24.5	1339	500
30	1	7/0.43	0.8	1.0	20	41/1.60	24	1.8	27.2	18.1	1511	500
	1.5	7/0.53	0.8	1.0	22	44/1.60	25	1.8	28.9	12.1	1755	500
	2.5	7/0.67	0.8	1.0	25	49/1.60	28	1.8	31.6	7.41	2186	500
	4	7/0.85	1.0	1.0	31	49/2.00	35	2.2	39.3	4.61	3408	500

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

SECTION 3 :
BARE STRANDED COPPER CONDUCTOR

CE EXTENDED PRODUCT OFFE

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SUPPORTING GLOBAL UTILITIES IN THE

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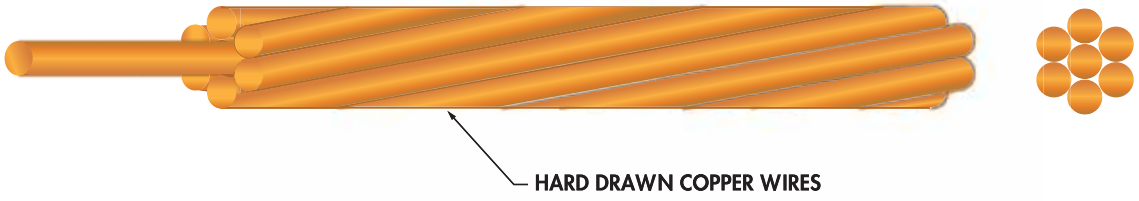
BARE STRANDED COPPER CONDUCTOR



Application : For grounding conductor from ground to air terminal and other application, wiring in air or in plastic tube.

Standard : TIS 11-2531

Construction : Conductor : Annealed copper wires, concentric stranded conductor, sizes 10 mm^2 up to 500 mm^2 Direction of outermost layer S

Nominal cross sectional area (mm^2)	Number and diameter of wire (No./mm)	Overall conductor diameter (approx.) (mm)	Maximum conductor resistance at 20°C (MΩ km)	Conductor weight (approx.) (kg/km)	Standard length (m)
10	7/1.35	4	1.83	92	1000/D
16	7/1.70	5	1.15	145	1000/D
25	7/2.14	6	0.727	230	1000/D
35	19/1.53	8	0.524	320	1000/D
50	19/1.78	9	0.387	430	1000/D
70	19/2.14	11	0.268	620	1000/D
95	19/2.52	13	0.193	860	1000/D
120	37/2.03	14	0.153	1085	500/D
150	37/2.25	16	0.124	1335	500/D
185	37/2.52	18	0.0991	1675	500/D
240	61/2.25	20	0.0754	2200	500/D
300	61/2.52	23	0.0601	2760	500/D
400	61/2.85	26	0.0470	3530	500/D
500	61/3.20	29	0.0366	4450	500/D

D : Packing in drum.

Note: We reserve the right to alter this specification without notice.

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SECTION 4 :
TECHNICAL INFORMATION

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1. Maximum allowable current carrying capacities for the insulated cables installed in locations where the ambient temperature is not in excees of 40°C shall not be less than those stated in the tables.

2. In locations where the ambient temperature exceeds 40°C the following multipliers must be used to obtain the maximum allowable current carrying capacities.

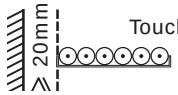
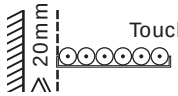
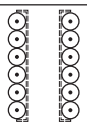
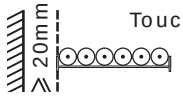
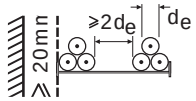
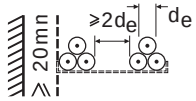
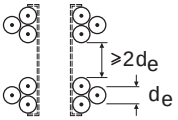
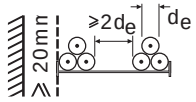
Temperature °C	MULTIPLIER		
	INSULATION GRADE		
	60°C	75°C	90°C
45	0.89	0.93	0.95
50	0.71	0.85	0.89
55	0.50	0.76	0.84
60	-	0.66	0.78
70	-	0.38	0.63
75	-	-	0.54
80	-	-	0.45
85	-	-	0.32
90	-	-	-

3. In a single conduit where the conductors are installed, the allowable ampacity of each conductor shall be reduced as shown in the following table.

LOCATIONS	Multiplier / Number of Conductors			
	1-3 cores	4 cores	5 cores	7-10 cores
Metal conduit.	0.70	0.63	0.56	0.49
Hard Vinyl (PVC) Conduit	0.60	0.53	0.46	0.39

4. Correction factors for groups of more than one circuit of single core cables and multicore cables.

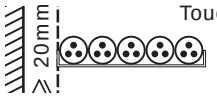
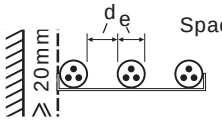
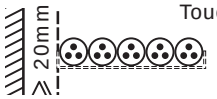
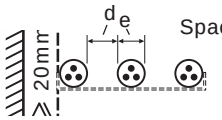
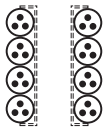
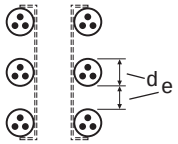
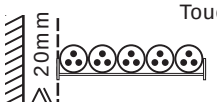
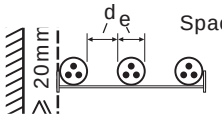
4.1 Correction factors for groups of more than one circuit of Single Core Cables in free air.

Installation method (See Note 1)		Number of three-phase circuit (Note 4)				Use as a multiplier to rating for
		Number of trays	1	2	3	
Unperforated trays (Note 2)		1 2 3	0.95 0.92 0.90	0.90 0.85 0.80	0.85 0.80 0.75	Three cables in horizontal formation
Perforated trays (Note 2)		1 2 3	0.95 0.95 0.90	0.90 0.85 0.85	0.85 0.80 0.80	
Vertical Perforated trays (Note 3)		1 2	0.95 0.90	0.85 0.85	- -	Three cables in vertical formation
Ladder supports, cleats, etc. (Note 2)		1 2 3	1.00 0.95 0.95	0.95 0.90 0.90	0.95 0.90 0.85	Three cables in horizontal formation
Unperforated trays (Note 2)		1 2 3	1.00 0.95 0.95	0.95 0.90 0.90	0.95 0.85 0.85	Three cables in trefoil formation
Perforated trays (Note 2)		1 2 3	1.00 0.95 0.95	1.00 0.95 0.85	0.95 0.90 -	
Vertical Perforated trays (Note 3)		1 2	1.00 1.00	0.90 0.90	0.90 0.85	
Ladder supports, cleats, etc. (Note 2)		1 2 3	1.00 0.95 0.95	1.00 0.95 0.95	1.00 0.95 0.90	

Notes:

1) Factors are given for single layers of cables (or trefoil groups) as shown in the tables and DO NOT apply when cables are installed in more than one layer touching each other. Values for such installations may be significantly lower and must be determined by an appropriate method.
2) Values are given for a vertical spacing between trays of 300 mm. For closer spacing the factors should be reduced.
3) Values are given for a horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing the factors should be reduced.
4) For circuits having more than one cable in paraller per phase, each set of three conductors should be considered as a circuit for the purposes of this table.

4.2 Correction factors for groups of more than one circuit of Single Core Cables in free air.

Installation method (See Note 1)			Number of trays	Number of Cable					
				1	2	3	4	6	9
Unperforated trays (Notes 2)		Touching	1	0.95	0.85	0.80	0.75	0.70	0.70
			2	0.95	0.85	0.75	0.75	0.70	0.65
			3	0.95	0.85	0.75	0.70	0.65	0.60
		Spaced	1	1.00	0.95	0.95	0.95	0.90	-
			2	0.95	0.95	0.90	0.90	0.85	-
			3	0.95	0.95	0.90	0.90	0.85	-
Perforated trays (Noted 2)		Touching	1	1.00	0.90	0.80	0.80	0.75	0.75
			2	1.00	0.85	0.80	0.75	0.75	0.70
			3	1.00	0.85	0.80	0.75	0.70	0.65
		Spaced	1	1.00	1.00	1.00	0.95	0.90	-
			2	1.00	1.00	0.95	0.90	0.85	-
			3	1.00	1.00	0.95	0.90	0.85	-
Vertical Perforated trays (Note 3)		Touching	1	1.00	0.90	0.80	0.75	0.75	0.70
			2	1.00	0.90	0.80	0.75	0.70	0.70
		Spaced	1	1.00	0.90	0.90	0.90	0.85	-
			2	1.00	0.90	0.90	0.85	0.85	-
Ladder supports. cleats, etc. (Note 2)		Touching	1	1.00	0.85	0.80	0.80	0.80	0.80
			2	1.00	0.85	0.80	0.80	0.75	0.75
			3	1.00	0.85	0.80	0.75	0.75	0.70
		Spaced	1	1.00	1.00	1.00	1.00	1.00	-
			2	1.00	1.00	1.00	0.95	0.95	-
			3	1.00	1.00	0.95	0.95	0.95	-

Notes:

1) Factors apply to single layer groups of cables as shown above and DO NOT apply when cables are installed in more than one layer touching each other. Values for such installations may be signifi cantly lower and must be determined by an appropriate method.
2) Values are given for a vertical spacing between trays of 300 mm. For closer vertical spacing the factors should be reduced.
3) Values are given for a horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing the factors should be reduced.

5. These ampacity tables are calculated by using the value of the purity of copper 99.99% and MCI-Draka special grade Polyethylene (PE) and Polyvinyl chloride (PVC).
6. The equivalent cross-sectional area of the aluminium and copper shall be as following (Can be used as ampacity comparison.)

(Area of conductor) = (Area of Cu conductor) x 1.6

TEMPERATURE CORRECTION FACTORS

FOR CONDUCTOR RESISTANCE

(Reference temperature 20°C)

Temperature (t) °C	Copper	Aluminum
0	1.085	1.088
1	1.081	1.083
2	1.076	1.078
3	1.072	1.074
4	1.067	1.069
5	1.063	1.064
6	1.058	1.060
7	1.054	1.055
8	1.049	1.051
9	1.045	1.046
10	1.041	1.042
11	1.037	1.038
12	1.032	1.033
13	1.028	1.029
14	1.024	1.025
15	1.020	1.021
16	1.016	1.016
17	1.012	1.012
18	1.008	1.008

Temperature (t) °C	Copper	Aluminum
19	1.004	1.004
20	1.000	1.000
21	0.996	0.996
22	0.992	0.992
23	0.988	0.988
24	0.985	0.984
25	0.981	0.980
26	0.977	0.976
27	0.973	0.973
28	0.970	0.969
29	0.966	0.965
30	0.962	0.961
31	0.959	0.958
32	0.955	0.954
33	0.951	0.950
34	0.948	0.947
35	0.944	0.943
36	0.941	0.939
37	0.937	0.936

The correction factor formual :

1 Plain annealed copper conductors

$$\text{factor} = \frac{1}{1 + 0.00393\,(t - 20)}$$

2 Plain aluminum conductors

$$\text{factor} = \frac{1}{1 + 0.00403\,(t - 20)}$$

where:

t : temperature of the conductor at the time of measurement in °C

TEMPERATURE CORRECTION FACTORS
FOR CONDUCTOR RESISTANCE

(Reference temperature 20°C)

Temperature (t) °C	natural Rubber	Iscbulytone Isopxene rubber	SBR	Silicone Rubber	Chloroprene Rubber	EPR	Vinyl
0	0.37	0.34	0.34	0.26	0.14	0.42	0.42
1	0.39	0.35	0.36	0.28	0.15	0.43	0.43
2	0.41	0.38	0.38	0.30	0.17	0.45	0.44
3	0.43	0.40	0.40	0.32	0.19	0.48	0.45
4	0.45	0.42	0.42	0.34	0.21	0.50	0.46
5	0.48	0.44	0.44	0.37	0.23	0.52	0.48
6	0.50	0.46	0.47	0.40	0.25	0.54	0.49
7	0.53	0.49	0.50	0.43	0.28	0.56	0.50
8	0.55	0.52	0.53	0.46	0.31	0.59	0.52
9	0.58	0.54	0.56	0.49	0.34	0.62	0.53
10	0.61	0.58	0.59	0.52	0.37	0.65	0.55
11	0.64	0.61	0.62	0.56	0.41	0.68	0.57
12	0.67	0.64	0.65	0.60	0.45	0.70	0.60
13	0.71	0.68	0.69	0.64	0.49	0.74	0.63
14	0.74	0.72	0.73	0.69	0.54	0.77	0.66
15	0.78	0.76	0.77	0.72	0.60	0.80	0.70
16	0.82	0.81	0.81	0.78	0.66	0.84	0.74
17	0.86	0.85	0.85	0.83	0.73	0.86	0.79
18	0.91	0.90	0.90	0.87	0.81	0.91	0.85
19	0.95	0.96	0.95	0.93	0.90	0.95	0.92
20	1.00	1.00	1.00	1.00	1.00	1.00	1.00
21	1.05	1.07	1.09	1.07	1.10	1.05	1.11
22	1.10	1.14	1.18	1.14	1.20	1.10	1.24
23	1.16	1.22	1.27	1.23	1.30	1.15	1.39
24	1.22	1.30	1.36	1.31	1.45	1.20	1.55
25	1.28	1.38	1.45	1.40	1.60	1.25	1.74
26	1.35	1.45	1.55	1.50	1.75	1.30	1.96
27	1.42	1.55	1.70	1.61	1.95	1.35	2.22
28	1.49	1.65	1.85	1.73	2.15	1.42	2.52
29	1.56	1.77	2.00	1.87	2.35	1.48	2.87
30	1.64	1.89	2.15	2.01	2.60	1.55	3.25
31	1.72	2.00	2.30	2.16	2.90	1.62	3.75
32	1.81	2.15	2.50	2.32	3.20	1.70	4.25
33	1.90	2.32	2.70	2.49	3.50	1.78	4.90
34	2.00	2.50	2.90	2.68	3.80	1.84	5.60
35	2.10	2.69	3.20	2.88	4.20	1.90	6.45

Remark :

High insulation resistance materials such as polyethylene, shall comply with the detail specification. For insulation without a specification, Factor = 1

The AC/DC resistance ratio of the conductor is given by the following formula.

$$k_2 = 1 + \lambda_s + \lambda_p$$

where :

k_2 = AC/DC resistance ratio of conductor

λ_s = skin effect factor

λ_p = proximity effect factor

The skin effect factor is given by;

$$\lambda_s = \frac{X^4}{192 + 0.8x^4}$$

where :

$$x = \sqrt{\frac{8\pi f}{R_0 k_1 \times 10^4}}$$

f = supply frequency, Hz

R_0 = DC resistance of conductor at 20°C, Ω/km

k_1 = reciprocal factor of temperature correction factor

The proximity effect factor is given by;

$$\lambda_p = \frac{X'^4}{192 + 0.8X'^4}\left(\frac{d_1}{S}\right)^2 \left\{ 0.312\left(\frac{d_1}{S}\right)^2 + \frac{1.18}{\frac{X'^4}{192 + 0.8X'^4} + 0.27} \right\}$$

where :

$X' = \sqrt{0.8}\, X$

d_1 = diameter of conductor, mm

S = distance between conductor axes, mm

COPPER CONDUCTOR RESISTANCE

NOMINAL DIRECT CURRENT RESISTANCE, OHMS / 1,000 METER AT 20°C

number of wires in the conductors of cables for fixed wiring

Nominal cross-sectional area (mm^2)	Number of wires in conductor	Diameter of wires in conductor (mm)	Maximum resistance of conductor at 20°C (Ohms/km)
0.5	1	0.80	36.0
1	1	1.13	18.1
1	7	0.40	18.1
1.5	1	1.38	12.1
1.5	7	0.50	12.1
2.5	1	1.78	7.41
2.5	7	0.67	7.41
4	1	2.25	4.61
4	7	0.85	4.61
6	7	1.04	3.08
10	7	1.35	1.83
16	7	1.70	1.15
25	7	2.14	0.727
35	19	1.53	0.524
50	19	1.78	0.387
70	19	2.14	0.268
95	19	2.52	0.193
120	37	2.03	0.153
150	37	2.25	0.124
185	37	2.52	0.0991
240	61	2.25	0.0754
300	61	2.52	0.0601
400	61	2.85	0.0470
500	61	3.20	0.0366

DIAMETER OF WIRES IN THE CONDUCTORS OF FLEXIBLE CABLES AND CORDS

Nominal cross-sectional area (mm^2)	Minimum Number of wires in conductor	Maximum Diameter of wires in conductor (mm.)	Maximum resistance of conductor at 20°C (Ohms/km)
0.5	16	0.21	39.0
0.5	28	0.16	39.0
0.75	24	0.21	26.0
0.75	42	1.16	26.0
1	32	0.21	19.5
1.5	30	0.26	13.3
2.5	50	0.26	7.98
4	56	0.31	4.95
6	84	0.31	3.30
10	80	0.41	1.91
16	126	0.41	1.21
25	196	0.41	0.780
35	276	0.41	0.554
50	396	0.41	0.386
70	360	0.51	0.272
95	475	0.51	0.206

Inductance and Inductive reactance of the cable is given by the following formula

$$L = 0.05 + 0.46 \log (2D/d) \text{ mH/m.}$$

$$X_L = 0.0157 + 0.144 \log (2D/d) \text{ ohm/km.}$$

Where :

L = Inductance

X_L = Inductive reactance

D = distance between center of conductors in mm. In case of three phase circuit where the three conductors are spread at the corners of an equilateral triangle, D is the distance between any two conductors.

d = Conductor diameter

RESISTANCE TO INDUSTRIAL CHEMICALS

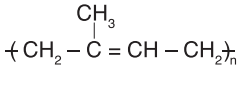
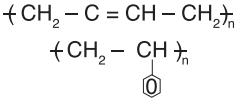
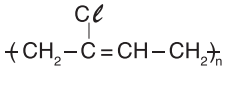
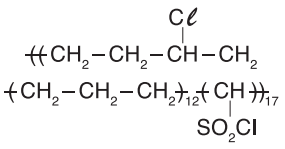
Reagent	Relative Rating							Reagent	Relative Rating						
	BR	CR	EPR	PVC	PE	XLPE	NYLON		BR	CR	EPR	PVC	PE	XLPE	NYLON
Acetone	◎	○	◎	X	◎	◎	○	Chloring Gas	△	△	X	X	X	X	◎
Aniline	○	X	○	○	○	○		Ozone	○		○	○	◎	◎	X
Ethanol	◎	◎	◎	△	○	○	○	Bromine	X	X	X	X	X	X	
Ethyleneglycol	○	◎	○	△	◎	◎	○	Nitric Acid, conc.	X	X	X	X	△	△	X
Xylene	X	X	X	X	○	○	○	Nitric Acid, 10%	X	X	△	○	○	○	△
Glycerin	◎	◎	◎	○	◎	◎	○	Fuming Nitric Acid	X	X		X	X	X	
Cresol	○	△	○	△	○	○	X	Tap Water	◎	◎	◎	◎	◎	◎	◎
Chloroform	X	X	X	X	△	△	X	Sea Water	○	◎	◎	◎	◎	◎	
Acetic Acid, conc,	○	△	○	X	○	○	△	Sulfuric Acid, conc.	X	X	X	△	△	△	X
Acetic Acid, 10%	○	X	○	△	◎	◎	○	Sulfuric Acid, 10%	○	○	○	◎	○	○	○
Ethyl Acetate	○	X	△	X	○	○	○	Phosphoric Acid	○	△	○	X	◎	◎	○
Carbon Tetrachloride	X	X	X	X	X	X	△	Sodium Hydroxide, 10%	○	○	○	○	○	○	◎
Cyclohexane	△	X	X		△	△		Freon	X	X		○	○	○	
Dioctyl Phthalate	◎	X		X				Formic Acid	△	X		○	○	○	◎
Trichloroethylene	X	X	X	△	△	△	△	JIC No. 1 Oil (OF Oil)	X	△	X	△	○	○	
Trichlorobenzene	X	X	X		△	△		ASTM No.1 Oil	○	○	△	△	○	○	
Toluene	X	X	X	X	△	△	○	ASTM No.2 Oil	△	○	△	△	○	○	
Carbon Disulfide	X	X	X	△	○	○		ASTM No.3 Oil	X	△	X	△	△	△	
Phenol	○	△	○	X	○	○	X	Gasolin	X	△	X	X	○	○	○
Furtural	◎	○	◎	△	◎	◎		Creosote Oil	△	X	X	X	△	△	
Hexane	X	△	X	△	○	○		JIS No.2 Oil	X	X	X	△	○	○	
Benzene	X	X	X	X	△	△	○	Heavy Oil	X	X	X	△	△	△	
Methanol	◎	◎	◎	X	○	○	△	Lube Oil	X	△	△	△	△	△	○
Methyl Ethyl Ketone	△	X	△	X	○	○		Silicone Oil	◎	◎	◎	○	◎	◎	
Dioxane				X	○	○		Vegetable Oil	◎	◎	○		◎	◎	
Nitrobenzene	○	X	○	X	○	○		Petroleum Ether	△	△		X	◎	◎	
Formaline	○	○		○	○	○	△	Trans Oil	X	△	X	○	○	○	
Ammonia, conc.	○	△	○	△	○	○	○	Naphtha	X	X	X	○	○	○	○
Ammonia, 10%	○	△	○	○	○	○	◎	Coal Tar					○	○	
Sodium Chloride	○	○	○	○	◎	◎	◎								
Hydrochloric Acid, conc.	○	○	○	△	○	○	X								
Hydrochloric Acid, 10%	◎	○	○	○	◎	◎	○								

Where : ◎ : High Resistance
○ : Fair Resistance
X : Not Applicable
△ : Poor Resistance, care on use

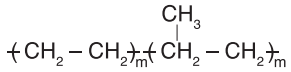
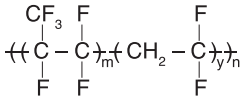
GENERAL COMPARISON DATA

Material		Polyvinyl Chloride	Low Dansity Polyethylene	Cross - linked Polyethylene
Designation		PVC	PE	XLPE
Chemical structure		$+CH_2-CH+_n$ Cl	$+CH_2-CH_2+_n$	$\sim CH_2-CH-CH_2\sim$ $\sim CH_2-CH-CH_2\sim$
Density		1.3 – 1.5	0.91 – 0.93	0.91 – 0.93
Hardness (Shore)		D30 – 90	D45 – 60	
Max. Operating Temp.	°C	70	75	92
Emergency Temp. Rating	°C	85	90	130
Short Circuit Temp. Rating	°C	120	150	250
Brittleness Temp.	°C	~-40	<-70	<-70
Softening Temp.	°C	120 – 140	100 – 115	
Thermal Expansion	/°C	0.7 – 2.5 x 10^4	1.6 – 1.8 x 10^4	1.6 – 1.8 x 10^4
Thermal Conductivity	Cal/cm · sec · °C	3.0 – 4.0 x 10^4	8 x 10^4	8 x 10^4
Specific Heat	Cal/°c.g.	0.3 – 0.5	0.55	0.55
Tensile Strength	kg/mm²	1.5 – 2.5	1.5 – 2.0	1.8 – 3.0
Elongation	%	200 – 400	300 – 700	300 – 700
Abrasion Resistance		Excellent	Good	Excellent
Voltage Breakdown	kv/mm	20 – 30	30 – 50	30 – 50
Volume Resistivity	Ω-cm	10^{12} – 10^{15}	>10^{16}	>10^{16}
Dielectric Constant		5 – 7	2.2 – 2.4	2.2 – 2.4
Dissipation Factor (Tan δ)		0.1 – 0.03	<0.0005	<0.0005
Weathering		Good	Inferior*	Inferior*
Ozone Resistance		Excellent	Excellent	Excellent
Flame Resistance		Self-Extinguish	Burn	Burn
Track Resistance		Inferior	Excellent	Excellent
Water Resistance		Fair	Excellent	Excellent
Acid Resistance		Excellent	Good	Good
Alkali Resistance		Excellent	Excellent	Excellent
Oil Resistance		Good	Excellent	Excellent
Solvent Resistance		Fair	Excellent	Excellent

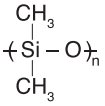
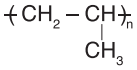
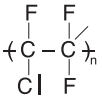
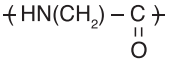
* Improved to "good" with mixture of carbon black.

	Polyisoprene	Styrene Butadiene Copolymer	Polychloroprene	Chlorosulphonated Polyethylene
	NR	SBR	CR	CSM
				
	0.93 – 0.94	0.93 – 0.94	1.15 – 1.23	1.10
	30 – 90	10 – 95	20 – 90	50 – 90
	60	75	80	90
	85			
	150			
	-55 – -58	-30 – -65	-30 – -50	-20 – -50
	1.8×10^4	1.8×10^4	1.9×10^4	1.8×10^4
	5.1×10^4	5.8×10^4	5.6×10^4	6.3×10^4
	0.52	–	0.52	
	0.8 – 3.0	0.4 – 3.0	0.7 – 3.0	0.5 – 2.0
	300 – 700	100 – 700	400 – 900	100 – 500
	Good	Good	Good	Good
	16 – 32	16 – 30	15 – 25	16 – 32
	10^{15}	$10^{14} – 10^{15}$	$10^{10} – 10^{12}$	$10^{13} – 10^{14}$
	3 – 5	3 – 5	7 – 10	
	0.3 – 0.5	2 – 5	1.7 – 4	
	Poor	Poor	Excellent	Good
	Poor	Inferior	Good	Good
	Burn	Burn	Self-Extinguish	Self-Extinguish
	Fair	Fair	Inferior	Good
	Fair	Fair	Fair	Fair
	Good	Fair	Excellent	Good
	Good	Good	Excellent	Excellent
	Poor	Inferior	Good	Fair
	Inferior	Inferior	Fair	Fair

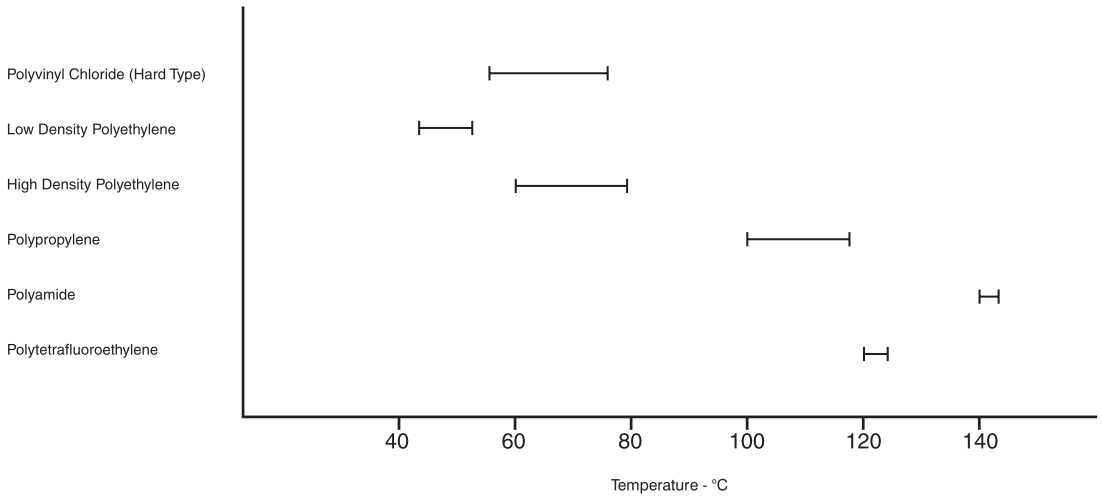
GENERAL COMPARISON DATA

Material		Ethylene Propylene Copolymer	Hexafluoropropylene Vinylidenefluoride Copolymer
Designation		EPM, EPDM	FPM
Chemical structure			
Density		0.86 – 0.87	1.82 – 1.85
Hardness (Shore)		40 – 85	60 – 90
Max. Operating Temp.	°C	90	200
Emergency Temp. Rating	°C		
Short Circuit Temp. Rating	°C		
Brittleness Temp.	°C	-40 – -60	-44 – -60
Softening Temp.	°C		
Thermal Expansion	/°C		1.6×10^{4}
Thermal Conductivity	Cal/cm · sec · °C		5.5×10^{4}
Specific Heat	Cal/°c.g.		
Tensile Strength	kg/mm^2	0.5 – 1.5	1.5 – 2.5
Elongation	%	300 – 700	200 – 600
Abrasion Resistance		Good	Good
Voltage Breakdown	kv/mm	20 – 30	24
Volume Resistivity	Ω-cm	$10^{14} – 10^{15}$	$10^{12} – 10^{15}$
Dielectric Constant		3 – 5	6 – 7
Dissipation Factor (Tan δ)		0.2 – 0.8	
Weathering		Excellent	Good
Ozone Resistance		Excellent	Good
Flame Resistance		Burn	Self-Extinguish
Track Resistance		Excellent	Fair
Water Resistance		Good	Excellent
Acid Resistance		Excellent	Excellent
Alkali Resistance		Excellent	Excellent
Oil Resistance		Inferior	Excellent
Solvent Resistance		Poor	Excellent

* Improved to "good" with mixture of carbon black.

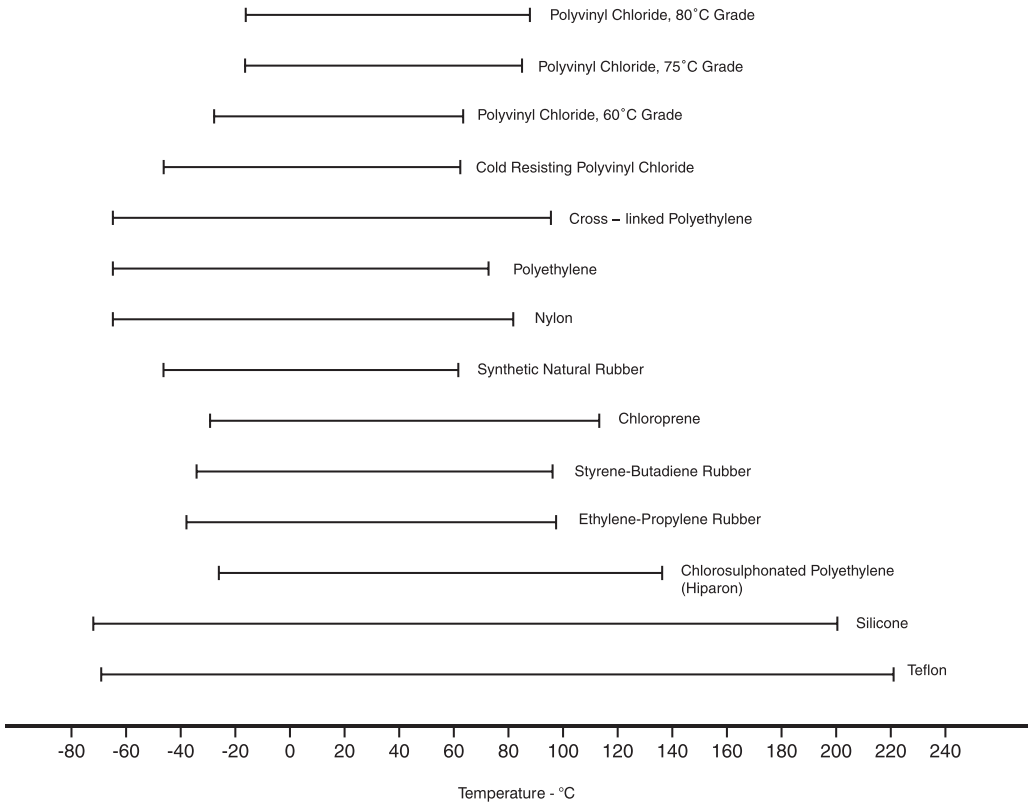
	Polyorganosiloxane	Polypropylene	Polytetora Fluoroethylene	Polychloro Torifluoroethylene	Polyamide
	Q	PP	PTFE	PCTFE	Nylon (12)
					
	0.97 – 1.40 50 – 85	0.9 – 0.915 R85 – 110	2.13 – 2.2 D50 – 65	2.1 R110 – 115	1.01 – 1.02 R110 – 110
	180	80	260	180	90
	70 – -100	150	310 <-70	<-70 210	120 -70 170 – 180
	2.6×10^4 5.7×10^4	$0.6 – 8.5 \times 10^5$ 2.8×10^4 0.46	10×10^5 6×10^4 0.25	$4.5 – 7.0 \times 10^5$ 6×10^4 0.22	12×10^5 $5.9 – 8.3 \times 10^4$ 0.62
	0.3 – 1.0 50 – 300 Fair	2.0 – 4.0 200 – 700 Excellent	1.4 – 2.1 200 Excellent	2.8 – 3.5 10 – 100 Excellent	5.0 – 6.0 180 – 285 Excellent
	20 – 40 10^{14}-10^{15} 3 – 4 0.1 – 1.0	20 - 32 $>10^{16}$ 2.0 – 2.2 0.0002 – 0.0006	15 – 30 $>10^{18}$ 2.0 >0.0002	10 – 20 1.2×10^{18} 2.24 – 2.8 0.0012 – 0.0036	20 – 30 $10^{14} – 10^{15}$ 3.5 – 4.5 0.03 – 0.06
	Good Excellent Burn Excellent Fair Poor Good Fair Fair	Inferior Excellent Burn Excellent Excellent Excellent Excellent Excellent Excellent	Excellent Excellent No Burn Excellent Excellent Excellent Excellent Excellent Excellent	Excellent Excellent No Burn Excellent Excellent Excellent Excellent Excellent Excellent	Inferior Good Burn Good Excellent Good Excellent Excellent Good

THERMAL PROPERTIES
Deflection temperature of plastics under load (ASTM D648)

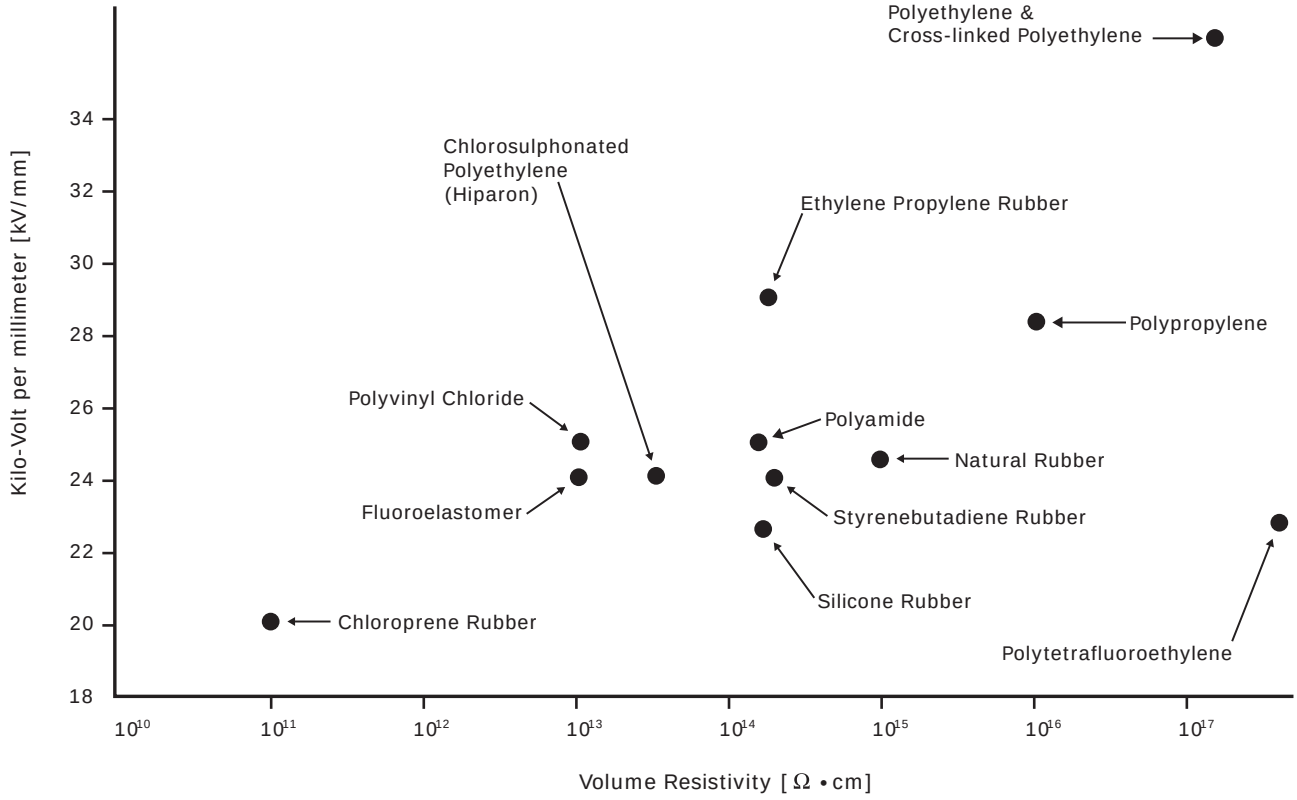


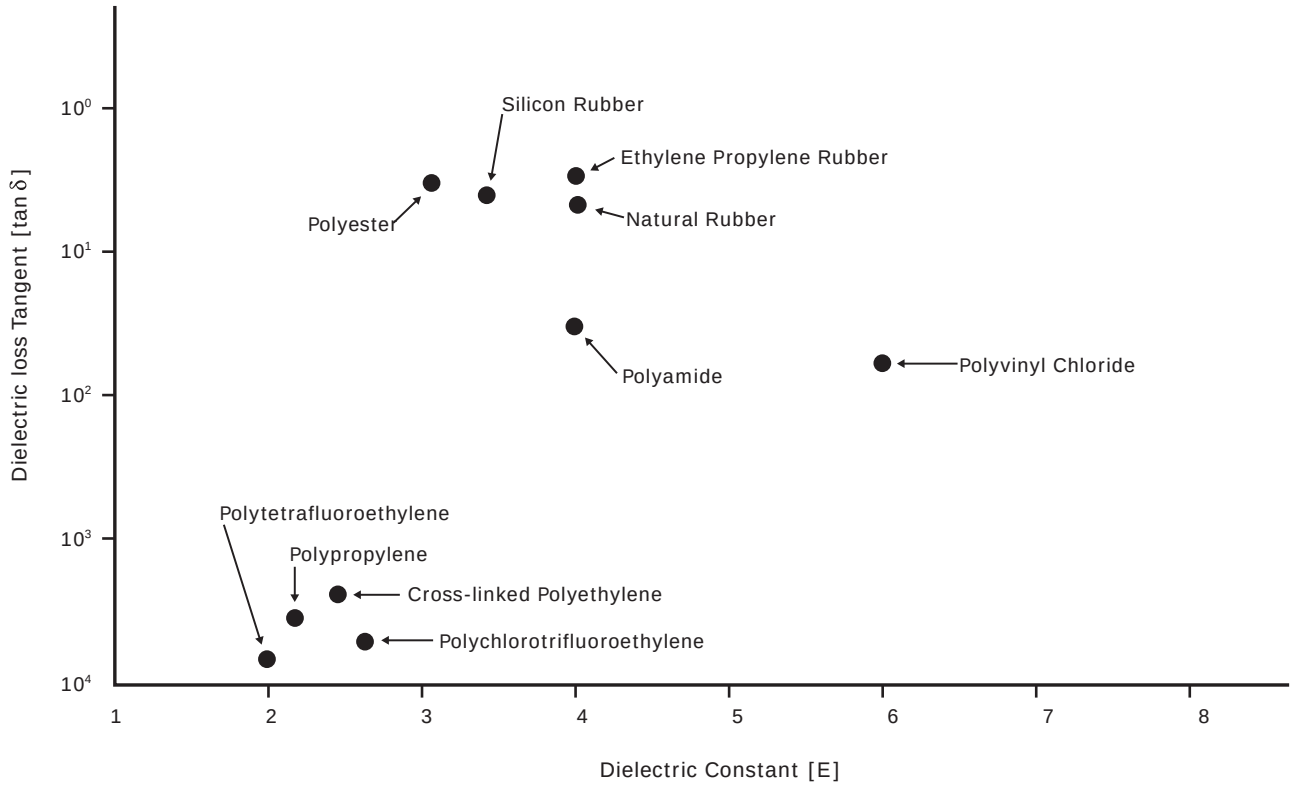
Operating Temperature

Max. point: Max, Continuous Operating Temperature
Min. point: Brittleness Temperature

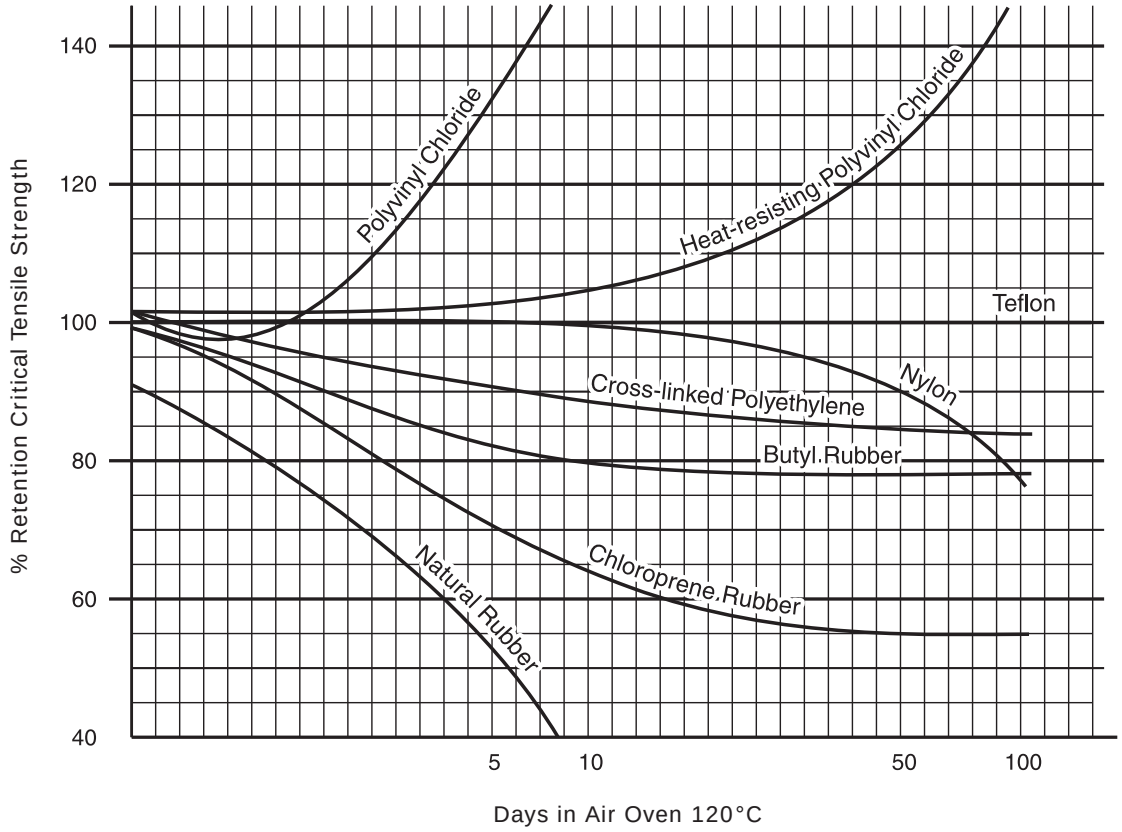


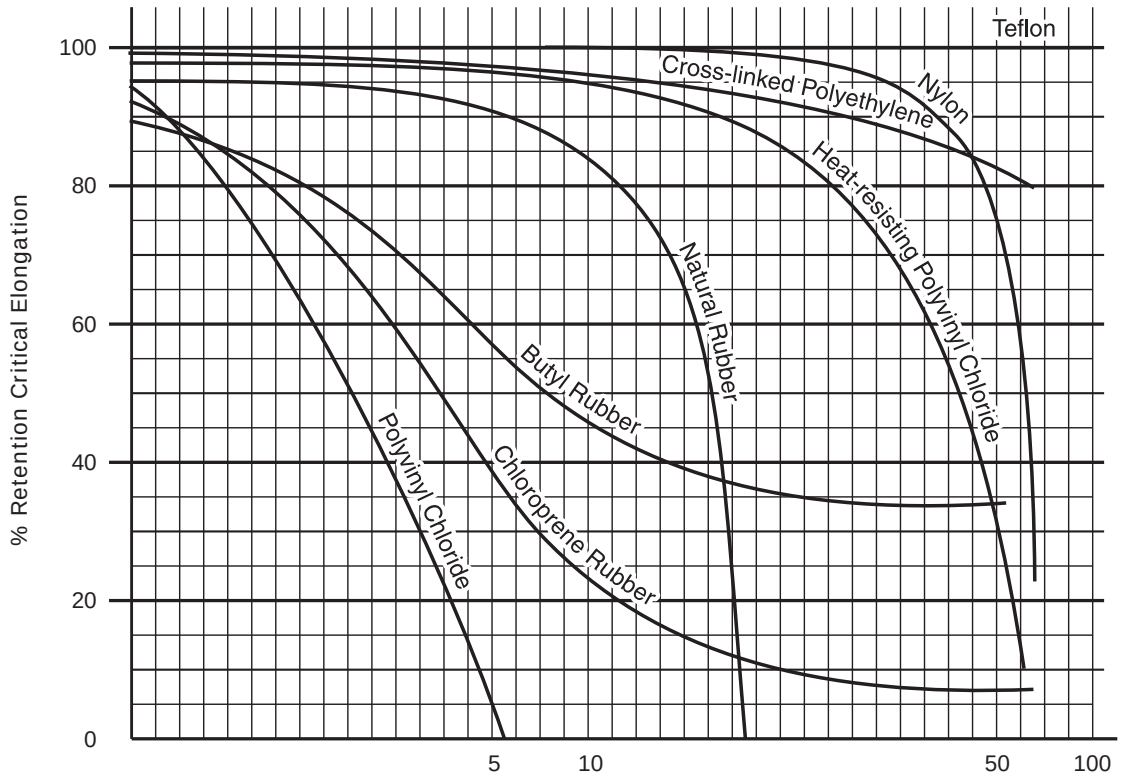
ELECTRICAL PROPERTIES





LONG-TIME HEAT AGING CURVES





BRITISH IMPERIAL STANDARD WIRE GAUGE (S.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
4/0	400	0.4000	10.16	160,000	0.1257	81.1	484.3	720.74
3/0	372	0.3720	9.4488	138,384	0.1087	70.1	418.9	623.37
2/0	348	0.3480	8.8392	121,104	0.0951	61.36	366.6	545.53
1/0	324	0.3240	8.2296	104,976	0.082448	53.19	317.8	472.88
1	300	0.300	7.62	90,000	0.070686	45.60	272.4	405.42
2	276	0.276	7.0104	76,176	0.059829	38.60	230.6	343.15
3	252	0.252	6.4008	63,504	0.049876	32.18	192.2	286.06
4	232	0.232	5.8928	53,824	0.042273	27.27	162.9	242.46
5	212	0.212	5.3848	44,944	0.035299	22.77	136.0	202.46
6	192.0	0.192	4.8768	36,864	0.028953	18.68	111.6	166.06
7	176	0.176	4.4704	30,976	0.024329	15.70	93.8	139.54
8	160	0.160	4.064	25,600	0.020106	12.972	77.5	115.32
9	144	0.144	3.6576	20,736	0.016286	10.507	62.8	93.408
10	128	0.128	3.2512	16,384	0.012868	8.302	49.6	73.804
11	116	0.116	2.9464	13,456	0.010568	6.818	40.7	60.614
12	104	0.104	2.6416	10,816	0.008495	5.481	32.7	48.722
13	92	0.092	2.3368	8,464	0.006648	4.289	25.6	38.127
14	80	0.080	2.032	6,400	0.005027	3.243	19.4	28.830
15	72	0.072	1.8288	5,184	0.004072	2.627	15.7	23.352
16	64	0.064	1.6256	4,096	0.003217	2.075	12.4	18.451
17	56	0.056	1.4224	3.136	0.002463	1.589	9.493	14.127
18	48	0.048	1.2192	2,304	0.001810	1.1675	6.974	10.379
19	40	0.040	1.016	1,600	0.001257	0.8107	4.843	7.207
20	36	0.036	0.9144	1,296	0.001018	0.6567	3.923	5.838
21	32	0.032	0.8128	1,024.0	0.000804	0.5189	3.100	4.613
22	28	0.028	0.7112	784.0	0.000616	0.3973	2.373	3.532
23	24	0.024	0.6096	576.0	0.00452	0.2919	1.744	2.595
24	22	0.022	0.5588	484.0	0.000380	0.2452	1.465	2.180
25	20	0.020	0.508	400.0	0.000314	0.2027	1.211	1.802
26	18	0.018	0.4572	324.0	0.000254	0.1642	0.98073	1.460
27	16	0.0164	0.41656	269.0	0.000211	0.13628	0.81413	1.212

BRITISH IMPERIAL STANDARD WIRE GAUGE (S.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
28	14.9	0.0149	0.37846	222.0	0.000174	0.11249	0.67201	1.00008
29	13.6	0.0136	0.34544	185.0	0.000145	0.09372	0.55986	0.83318
30	12.4	0.0124	0.31496	153.8	0.000121	0.07791	0.46542	0.69263
31	11.6	0.0116	0.29464	134.56	0.0001057	0.06818	0.40731	0.60614
32	11	0.0108	0.27432	116.64	0.0000916	0.05910	0.35306	0.52542
33	10	0.0100	0.254	100.00	0.0000785	0.05067	0.30269	0.45046
34	9.2	0.0092	0.23368	84.64	0.0000665	0.04289	0.25620	0.38127
35	8.4	0.0084	0.21336	70.56	0.0000554	0.03575	0.21358	0.31785
36	8	0.0076	0.19304	57.76	0.0000454	0.02927	0.174836	0.26019
37	7	0.0068	0.17272	46.24	0.0000363	0.02343	0.139966	0.20829
38	1	0.0006	0.01524	0.36	0.0000003	0.00018	0.001090	0.00162
39	5	0.0052	0.13208	27.04	0.0000212	0.01370	0.081849	0.12181
40	5	0.0048	0.12192	23.04	0.0000181	0.01167	0.069741	0.10379
41	4	0.0044	0.11176	19.36	0.0000152	0.00981	0.058602	0.08721
42	4	0.0040	0.1016	16.00	0.0000126	0.00811	0.048431	0.07207
43	4	0.0036	0.09144	12.96	0.0000102	0.00657	0.039229	0.05838
44	3	0.0032	0.08128	10.24	0.0000080	0.00519	0.030996	0.04613
45	3	0.0028	0.07112	7.84	0.0000062	0.00397	0.023731	0.03532
46	2	0.0024	0.06096	5.76	0.0000045	0.00292	0.017435	0.02595
47	2	0.0020	0.0508	4.00	0.0000031	0.00203	0.012108	0.01802
48	2	0.0016	0.04064	2.56	0.0000020	0.00130	0.007749	0.01153
49	1	0.0012	0.03048	1.44	0.0000011	0.00073	0.004359	0.00649
50	1	0.0010	0.0254	1.00	0.0000008	0.00051	0.003027	0.00450

BIRMINGHAM IRON WIRE GAUGE (B.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
4/0	454	0.4540	11.5316	206,116	0.1619	104.4	623.9	928.48
3/0	425	0.4250	10.795	180,625	0.1419	91.5	546.9	813.65
2/0	380	0.3800	9.652	144,400	0.1134	73.17	437.1	650.47
1/0	340	0.3400	8.636	115,600	0.090792	58.58	349.9	520.74
1	300	0.300	7.62	90,000	0.070686	45.60	272.4	405.42
2	284	0.284	7.2136	80,656	0.063347	40.87	244.2	363.33
3	259	0.259	6.5786	67,081	0.052658	33.99	203.1	302.18
4	238	0.238	6.0452	56,644	0.044488	28.70	171.5	255.16
5	220	0.220	5.588	48,400	0.038013	24.52	146.5	218.02
6	203.0	0.203	5.1562	41,209	0.032366	20.88	124.8	185.63
7	180	0.180	4.572	32,400	0.025447	16.42	98.08	145.95
8	165	0.165	4.191	27,225	0.021383	13.795	82.40	122.64
9	148	0.148	3.7592	21,904	0.017203	11.099	66.29	98.670
10	134	0.134	3.4036	17,956	0.014103	9.098	54.34	80.885
11	120	0.120	3.048	14,400	0.011310	7.297	43.59	64.867
12	109	0.109	2.7686	11,881	0.009331	6.020	35.96	53.520
13	95	0.095	2.413	9,025	0.007088	4.573	27.32	40.654
14	83	0.083	2.1082	6,889	0.005411	3.491	20.85	31.032
15	72	0.072	1.8288	5,184	0.004072	2.627	18.46	23.352
16	65	0.065	1.651	4,225	0.003318	2.141	12.79	19.032
17	58	0.058	1.4732	3,364	0.002642	1.705	10.180	15.154
18	49	0.049	1.2446	2,401	0.001886	1.2166	7.269	10.816
19	42	0.042	1.0668	1,764	0.001385	0.8938	5.388	7.946
20	35	0.035	0.889	1,225	0.000962	0.6207	3.708	5.518
21	32	0.032	0.8128	1,024.0	0.000804	0.5189	3.099	4.613
22	28	0.028	0.7112	784.0	0.000616	0.3973	2.373	3.532
23	25	0.025	0.635	625.0	0.000491	0.3167	1.892	2.815
24	22	0.022	0.5588	484.0	0.000380	0.2452	1.465	2.180
25	20	0.020	0.508	400.0	0.000314	0.2027	1.211	1.802
26	18	0.018	0.4572	324.0	0.000254	0.1642	0.9809	1.460
27	16	0.016	0.4064	256.0	0.000201	0.12972	0.7750	1.153

BIRMINGHAM IRON WIRE GAUGE (B.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
28	14	0.014	0.3556	196.0	0.000154	0.09931	0.5931	0.8829
29	13	0.013	0.3302	169.0	0.000133	0.08563	0.5114	0.76128
30	12	0.012	0.3048	144.0	0.000113	0.07297	0.4359	0.64867
31	10	0.010	0.254	100.00	0.0000785	0.05067	0.3027	0.45046
32	9	0.009	0.2286	81.00	0.0000636	0.04104	0.2452	0.36488
33	8	0.008	0.2032	64.00	0.0000503	0.03243	0.1937	0.28830
34	7	0.007	0.1778	49.00	0.0000385	0.02483	0.1483	0.22073
35	5	0.005	0.127	25.00	0.0000196	0.01267	0.07565	0.11262
36	4	0.004	0.1016	16.00	0.0000126	0.00811	0.04845	0.07207

AMERICAN WIRE GAUGE (A.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
4/0	460	0.4600	11.684	211.600	0.1662	107.2	640.5	953.18
3/0	409.6	0.4096	10.4038	167.772	0.1318	85.0	507.9	755.75
2/0	364.8	0.3648	9.26592	133.079	0.1045	67.43	402.8	599.47
1/0	324.9	0.3249	8.25246	105.560	0.082907	53.49	319.5	475.51
1	289.3	0.2893	7.34822	83.694	0.065734	42.41	253.5	377.01
2	257.6	0.2576	6.54304	66.358	0.052117	33.62	200.9	298.92
3	229.4	0.2294	5.82676	52.624	0.041331	26.67	159.3	237.05
4	204.3	0.2043	5.18922	41.738	0.032781	21.15	126.4	188.02
5	181.9	0.1819	4.62026	33.088	0.025987	16.77	100.2	149.05
6	162.0	0.1620	4.1148	26.244	0.020612	13.30	79.46	118.22
7	144.3	0.1443	3.66522	20.822	0.016354	10.55	63.02	93.798
8	128.50	0.1285	3.2639	16.512	0.012969	8.367	49.97	74.382
9	114.4	0.1144	2.90576	13.087	0.010279	6.631	39.63	58.954
10	101.9	0.1019	2.58826	10.384	0.008155	5.261	31.43	46.774
11	90.74	0.09074	2.3048	8.234	0.006467	4.172	24.92	37.090
12	80.81	0.08081	2.05257	6.530	0.005129	3.309	19.77	29.416
13	71.96	0.07196	1.82778	5.178	0.004067	2.624	15.68	23.326
14	64.08	0.06408	1.62763	4.106	0.003225	2.081	12.43	18.497
15	57.07	0.05707	1.44958	3.257	0.002558	1.650	9.858	14.672
16	50.82	0.05082	1.29083	2.583	0.002028	1.309	7.818	11.63
17	45.26	0.04526	1.1496	2.048	0.001609	1.038	6.200	9.228
18	40.3	0.04030	1.02362	1.624	0.001276	0.8229	4.917	7.316
19	35.89	0.03589	0.91161	1.288	0.001012	0.6527	3.899	5.802
20	31.96	0.03196	0.81178	1.021	0.000802	0.5176	3.092	4.601
21	28.46	0.02846	0.72288	810.0	0.000636	0.4104	2.452	3.649
22	25.35	0.02535	0.64389	642.6	0.000505	0.3256	1.945	2.895
23	22.57	0.02257	0.57328	509.4	0.000400	0.2581	1.542	2.295
24	20.10	0.02010	0.51054	404.0	0.000317	0.2047	1.233	1.820
25	17.90	0.01790	0.45466	320.4	0.000252	0.1624	0.9699	1.443
26	15.94	0.01594	0.40488	254.1	0.000200	0.1287	0.7692	1.14
27	14.20	0.01420	0.36068	201.6	0.000158	0.10217	0.6100	0.9083

AMERICAN WIRE GAUGE (A.W.G.)

Number of Wire Gauge	Diameter			Sectional area			Weight	
	Mil	Inch	mm.	Cir. Mil	Inch^2	mm^2	lb/100 ft	kg/km
28	12.64	0.01264	0.32106	159.8	0.000125	0.08096	0.4837	0.7197
29	11.26	0.01126	0.286	126.8	0.000100	0.06424	0.3836	0.5711
30	10.03	0.01003	0.25476	100.6	0.000079	0.05098	0.3042	0.4532
31	8.928	0.008928	0.22677	79.71	0.0000626	0.04039	0.2413	0.3591
32	7.950	0.007950	0.20193	63.20	0.0000496	0.03203	0.1913	0.2847
33	7.080	0.007080	0.17983	50.13	0.0000394	0.02540	0.1517	0.2258
34	6.305	0.006305	0.16015	39.75	0.0000312	0.02014	0.1203	0.1791
35	5.615	0.005615	0.14262	31.53	0.0000248	0.01598	0.09542	0.1420
36	5.000	0.005000	0.127	25.00	0.0000196	0.01267	0.07567	0.1126
37	4.453	0.004453	0.11311	19.83	0.0000156	0.010048	0.06001	0.0893
38	3.965	0.003965	0.10071	15.72	0.0000123	0.007966	0.04759	0.0708
39	3.531	0.003531	0.08969	12.47	0.0000098	0.006318	0.03774	0.0562
40	3.145	0.003145	0.07988	9.89	0.0000078	0.005012	0.02993	0.0446
41	2.800	0.002800	0.07112	7.84	0.0000062	0.003973	0.02374	0.0353
42	2.494	0.002494	0.06335	6.22	0.0000049	0.003152	0.01882	0.0280
43	2.221	0.002221	0.05641	4.93	0.0000039	0.002500	0.01493	0.0222
44	1.978	0.001978	0.05024	3.91	0.0000031	0.001982	0.01184	0.0176

SYMBOLS OF ELECTRICAL UNITS

ELECTRICAL UNIT		SYMBOL
CURRENT	(AMPERE)	A
VOLTAGE	(VOLT)	V (kV)
RESISTANCE	(OHM)	W (kΩ, MW)
ELECTRIC POWER	(WATT)	W (kW), (MW.)
ELECTRIC ENERGY	(WATT HOUR)	WH (kWH.)
HORSE POWER		HP
POWER FACTOR	(COS θ)	P.F.
FREQUENCY	(HERTZ)	Hz
CAPACITANCE	(FARAD)	F (μ F, ρF)
APPARENT POWER	(VOLT, AMPERE)	VA (kVA)
DIRECT CURRENT		DC
ALTERNATING CURRENT		AC
EFFICIENCY		Eff.
MAXIMUM VALUES	(VOLT, AMPERE)	Em, Im
AVERAGE VALUES	(VOLT, AMPERE)	eav, Iav
EFFECTIVE VALUES	(VOLT, AMPERE)	E, I
INSTANTANEOUS VALUES	(VOLT, AMPERE)	e, I

Electrical formulas for determining Ampere, Kilowatt, Kilovolt-ampere and Horse Power

DIRECT CURRENT	ALTERNATING CURRENT	
	SINGLE PHASE	THREE PHASE
$A = \frac{kW \times 1000}{V}$	$A = \frac{kW \times 1000}{V \times P.F.}$	$A = \frac{kW \times 1000}{1.73 \times V \times P.F.}$
$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{V}$	$A = \frac{kVA \times 1000}{1.73 \times V}$
$A = \frac{HP \times 746}{V \times (\%Eff.)}$	$A = \frac{HP \times 746}{V \times (\%Eff.) \times P.F.}$	$A = \frac{HP \times 746}{1.73 \times V \times (\%Eff.) \times P.F.}$
$kW = \frac{A \times V}{1000}$	$kW = \frac{A \times V \times P.F.}{1000}$	$kW = \frac{A \times V \times 1.73 \times P.F.}{1000}$
$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V}{1000}$	$kVA = \frac{A \times V \times 1.73}{1000}$
$HP = \frac{A \times V \times (\%Eff.)}{746}$	$HP = \frac{A \times V \times (\%Eff.) \times P.F.}{746}$	$HP = \frac{A \times V \times 1.73 \times (\%Eff.) \times P.F.}{746}$

APPROXIMATE MOTER AMPERES PER TERMINAL :

	220 V a - c = 4	amperes per H.P.
3 phase	220 V a - c = 2.5	amperes per H.P.
3 phase	380 V a - c = 1.41	amperes per H.P.
3 phase	440 V a - c = 1.25	amperes per H.P.
3 phase	550 V a - c = 1	amperes per H.P.

ITEMS		DESCRIPTIONS			
1. LENGTH.	1 micron	= 0.001 mm.	= 3.94 x 10^5 in.		
	1 mil	= 0.0254 mm.	= 0.001 in.		
	1 mm	= 39.37 mils.	= 0.03937 in.		
	1 cm	= 0.3937 in.	= 0.0328 ft.		
	1 inch	= 25.4 mm.	= 0.083 ft.	= 0.0278 yd.	= 2.54 cm.
	1 feet	= 0.305 m.	= 0.333 vd.		
	1 yard	= 0.914 m.	= 91.44 cm.		
	1 meter	= 39.37 in.	= 3.28 ft.	= 1.094 yd.	
	1 kilometer	= 3,281 ft.	= 1,094 yd.	= 0.6213 mile	
	1 mile	= 5, 280 ft.	= 1,760 yd.	= 1, 609 m.	= 1,609 km.
2. AREA.	1 MCM	= 1000 CM	(Circular Mil)	= 0.5067 mm^2	= 1/1000 in^2
	1 CM	= 0.0005067 mm^2	= 0.0000007854 in^2	= 0.7854 sq. mil.	
	1 mm^2	= 1973 CM	= 0.00155 in^2	= 1,550 sq.mil.	
	1 in^2	= 1273240 Cm	= 645.1 mm^2	= 0.0069 $ft.^2$	
	1 yd^2	= 1,296 in^2	= 0.83613 m^2		
	1m^2	= 1,550 in^2	= 10.7 $ft.^2$	= 1.195 $yd.^2$	
	1 km^2	= 0.001562 $mile^2$			
	1 $mile^2$	= 27,880,000 $ft.^2$	= 3,098,000 $yd.^2$	= 2,590,000 m^2	= 2.59 km^2
3. VOLUME.	1 cm^3	= 0.061 in^3			
	1 in^3	= 16.39 cm^3	= 0.0036 gal.	= 0.0005787 $ft.^3$	
	1 l	= 1,000 cm^3	= 61.023 in^3	= 0.2642 gal	= 0.03531 $ft.^3$
	1 gal.	= 3,785 cm^3	= 231 in^3	= 0.1337 $ft.^3$	= 0.004951 yd^3
	1 ft^3	= 28,317 cm^3	= 1,728 in^3	= 28.32 l.	= 7.48 gal
	1 $yd.^3$	= 46,656 in^3	= 0.7646 m^3		
	1 m^3	= 61,023 in^3	= 35.31 $ft.^3$	= 1.308 $yd.^3$	
4. WEIGHT.	1 g.	= 15.43 gr.	= 0.03527 oz.	= 0.002205 lb.	
	1 oz.	= 437.5 gr.	= 28.35 g.	= 0.0625 lb.	
	1 lb.	= 7,000 gr.	= 453.6 g.	= 16 oz.	= 0.4536 kg.
	1 kg.	= 15,432 gr.	= 35.27 oz.	= 2.205 lb.	
	1 ton (short)	= 2,000 lb.	= 907.2 kg.	= 0.8928 ton (long)	
	1 ton (long)	= 2,240 lb.	= 1.12 ton (short)	= 1.016 ton (metric)	
	1 ton (metric)	= 2,204.62 lb.			
5. ENERGY.	1 BTU	= 1,055 joules	= 778.1 ft.-lb	= 252 g-cal.	= 107.6 kg.-m.
		= 0.2930 watt-hr.			
	1 watt-hr.	= 3,600 joules	= 2,655.4 ft.-lb.	= 860 g-cal.	= 367.1 kg.-m.
		= 3.413 BTU	= 0.001341 hp.-hr.		
	1 hp.-hr.	= 2,684,000 joules	= 1,980,000 ft.-lb.		= 273,700 kg.-cm.
		= 745.6 watt-hr.			
	1 kw-hr	= 2,655,000 ft.-lb.	= 367,100 kg.-m.		= 1.34 hp.-hr.
6. POWER.	1 watt	= 44.26 ft.-lb./min	= 6.119 kg-m/mim		= 0.001341 hp.
	1 hp.	= 33,000 ft.-lb./min	= 745.6 watts		= 550 ft.-lb./sec.
		= 76.04 kg-m/sec			
	1 kw.	= 44,256.7 ft.-lb./min.	= 101.979 kg-m/sec.		= 1.341 hp.
		= 1,000 watts.			
7. TEMPERATURE.	Temp °C	= 5/9 (temp °F-32)			
	Temp °F	= (9/5 x temp °C) +32			

CONDUCTIVITY AND DENSITY OF METALS

KIND	SYMBOL	CONDUCTIVITY (% IACS)	DENSITY (g/cm^3)
SILVER	Ag	108.6	10.50
STANDARD COPPER (ANNEALED)	Cu	100.0	8.89
GOLD	Au	72.5	19.30
ALUMINIUM	Al	61.0	2.70
IRON	Fe	13.0	7.78
TIN	Sn	12.2	7.29
STEEL	-	11.6	7.78

Material	Specific resistance, 20°C			Temperature coefficient 20°C	Mass g per cu.cm.
	μ Ohms per cm. cube	μ Ohms per in. cube	Ohms-per cir. mil-ft		
Annealed copper	1.724	0.6788	10.37	0.00393	8.89
Hard-drawn copper	1.79	0.695	10.77	0.00378	8.89
Annealed aluminium	2 .82	1.113	17.0	0.0039	2.7
Hard-drawn aluminium	2 .92	1.15	17.5	0.0038	2.7
Pure iron	10 .0	3.93	60.0	0.006	7.86
Steel wire	10.7-17.5	4.2-6.9	64-106	0.006-0.00036	7.78
Cast iron	75-100	29.5-39.4	450-600	0.001-0.00074	7.32

ISO9001
Certificate of Approval
MCI-Draka Cable Company Limited
ISO14001
Certificate of Approval
MCI-Draka Cable Company Limited
For the scope :
1. Manufacture of round copper rod
2. Manufacture of polyvinyl chloride, polyethylene or crosslinked polyethylene insulated copper cables and low voltage control cables
3. Manufacture of fire resistant, flame retardant and low smoke/zero halogen cables
OHSAS
Certificate of Approval
MCI-Draka Cable Company Limited
กระทรวงอุตสาหกรรม
บริษัท สายไฟฟ้าเอ็มซีไอ-ดราก้า จำกัด
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QUALITY

A RIGOROUS APPROACH TO QUALITY HELPS THE COMPANY TO MAINTAIN ITS WORLD-LEADING POSITION.

A rigorous approach to quality has helped the company to maintain its world-leading position and made a significant contribution to the company's continued success. **Customer satisfaction is the number-one priority** for the Prysmian Group and the company's quality initiatives include **"zero defects"** and **"right first time"** approaches for all customer-related activities.

In particular, the quality of products is tested at every stage of the production cycle and is ensured by strict monitoring, from the procurement of raw materials to the delivery of the finished product.

Internally, **Prysmian Quality Management System (PQMS), based on ISO 9001 international standard**, is designed to support a company culture based on continuous improvement, challenging objectives, effective control and corrective action. It is geared towards increasing the value and success of the business by improving individual skills and efficiency and gradually reducing the costs of "poor quality" and, in doing so, it promotes the sharing of best practice across the Group and encourages employees to question everything and eliminate activities with no added value.

For pursuing the above targets, Prysmian has a dedicated Quality department, directly reporting to the company COO, whose main goals are:

- providing Group **strategic guidelines** in terms of quality;
- **monitoring and controlling** the correct application of defined rules;
- **supporting corporate functions and affiliates** from both methodological and operational point of view.

To comply with this above mission, a **worldwide Quality Organizational Model has been defined** in order to assure the same focus at country level.

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