



UNIFLEX

WIRES AND CABLES LTD

Transforming cables for Energy Efficiency



think local first.



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Company Profile

Uniflex Wires and Cables Limited an ISO 9001:2018, ISO 14001:2015 and ISO 45001:2018 certified company, was established in 2022 as a privately owned greenfield manufacturing project in Lusaka with a vision to manufacture and distribute the **best-in-class Energy Efficient Cables** in Zambia & its neighbouring countries and thereby contribute critically in expanding the national Industrial capacity. To realize this vision the management of Uniflex has invested in Zambia's Energy future and also to strengthen the philosophy of **"Make in Zambia"**.

UNIFLEX believes that with the availability of current Copper resources & manufacturing ecosystem which Zambia possess, it is high time for Zambia to emerge as a Copper Cable manufacturing hub of Africa. This will enable the nation's economy to dominantly increase its exports of Copper Finished Products and minimize the imports of the same, eventually leading to positive Trade Flows for Copper Finished Products. Also, considering the key economic development policies of the Government of the Republic of Zambia such as **VISION 2030**, 8th National Development Plan, Rural Electrification Master Plan, Proudly Zambian initiatives and it can be aptly concluded that the nation has already embarked on and shall experience exponential growth in near future in the areas of Grid Expansion, Electrification, Agriculture, Renewable Energy, Mining and Infrastructure. Therefore, it can be aptly summarized with conviction that now it is the most conducive economical phase whereby the Zambian Copper Manufacturer ecosystem should come together to contribute effectively to the nation's development by producing the Energy efficient Copper products and distributing them locally & internationally at a highly competitive price.

The Company has the fundamental philosophy of **"Quality and Trust is our DNA"** and therefore the manufacturing facility of Uniflex Wires and Cables Limited is one of the State-of-art in the region. The facility is equipped with state-of-art Production Machines and Testing Laboratory, further enhanced by our team of highly experienced & skilled Human Resources from the cable manufacturing industry.

Uniflex Wires and Cables are manufactured as per **ZABS**, **SABS** and other International Specifications and hence its uniqueness is portrayed in its relentless commitment to optimum specifications of **Product Quality** which is complemented by its best-in-class industry Technical Expertise, specialized Research & Development initiatives and extensive **manufacturing** capabilities which allows it to serve the Customer with the superior quality product.

Uniflex range of Cables products as of date includes Low Voltage Cables having Voltage ratings up to **3.3kV**, Overhead Conductors and Customized cables for specialized applications which shall actively cater to the demand of Mining, Agriculture, Construction, Energy Utilities, Industries, Renewable Energy and Retail market segments of Zambia and neighbouring countries.

Uniflex Cables has always positioned **Customer Delight** as its top priority and this is achieved by working closely with consultants, contractors and other premium customers to deliver high-quality products and solutions. We combine our cables with technical expertise, tailored logistics, project management, and a strong drive for sustainability. We have extensive stockholding available for immediate dispatch, and we offer the shortest manufacturing lead times in the industry.



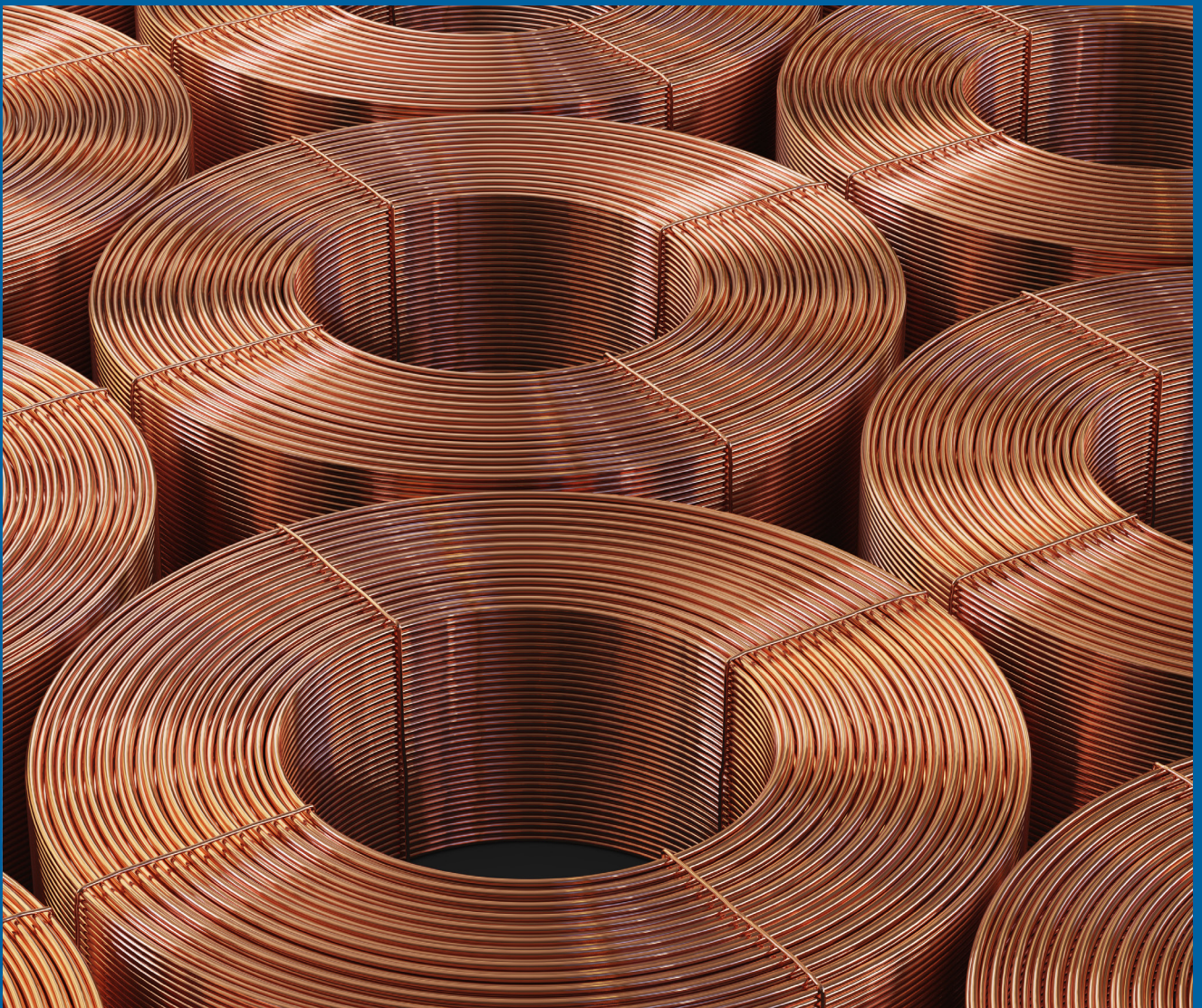
Vision

Our vision is to manufacture and distribute the best-in-class Energy Efficient Cables made in Zambia, locally & neighbouring regions, to become the most preferred cable brand globally by emerging as the pioneers in the sector of cable manufacturing and thereby contribute critically to expanding Zambia's Industrial Capacity for achieving national economic development.

Strategic Goals & Values

To become a responsible Corporate Citizen of Zambia by investing in Zambia's Energy future and contributing to national economic development.

Deliver long-term financial returns and continued sustainable growth by adhering to our core values of Integrity and Responsibility towards society and the environment.



Quality and Accreditation

The management of Uniflex Wires and Cables Limited has a strong commitment & adherence to the Manufacturing Process & Products Quality. We believe that the fundamental ingredient in catering to overall customer satisfaction is “Quality Product”; to realize a Quality Product, the most critical element is “Process Quality”.

To reinforce this concept, Uniflex Wires and Cables Ltd implemented an integrated Quality Management System which comprises ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018, which together form our Process Certification and the output of this system is superior Quality Cables which are manufactured and certified by SABS and ZABS.



Quality Certifications



Solutions for critical Market Sectors

Mining & Mineral Processing



Energy Utilities



Agriculture



Solutions for critical Market Sectors

Industries



Construction & EPC



Renewable Energy

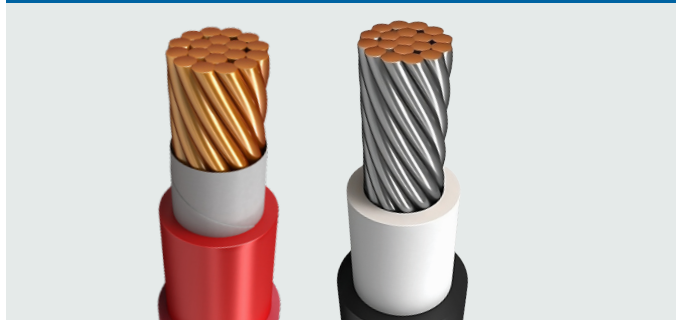


Product Range

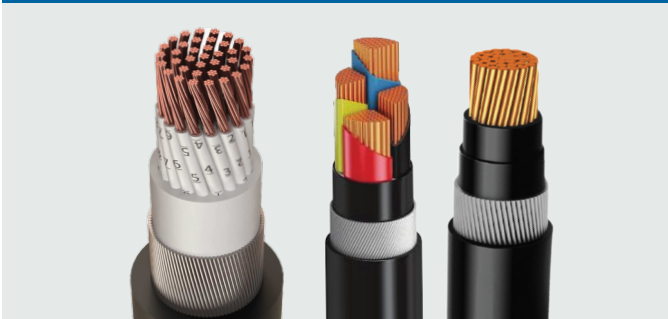
General Wires and Cables



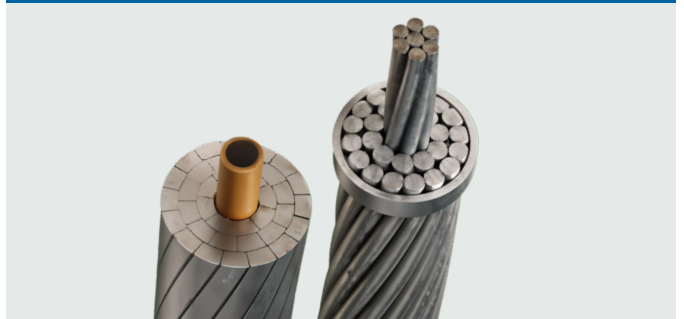
Solar PV Cables



LV Power and Control Cables



Overhead Conductors



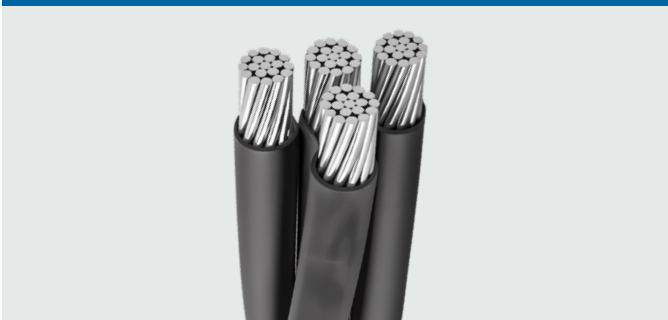
Medium Voltage Cables



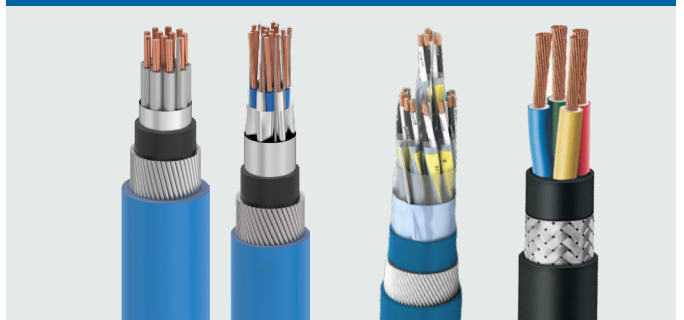
Enamelled Round Copper Wires



Aerial Bundle Cables



Instrumentation & Special Cables



General Wires and Cables



Single Core Building Wires



Product Application: General Wiring, Industrial Wiring in Conduits, protected installation in switchgear, lighting and appliances.

Product Standard: As per SANS 1507-2&3, ZS 688-2&3.

Type of Conductor: As per SANS:1411-1, ZS 756-1.

Type of Insulation Material: PVC as per SANS: 1411-2, ZS 756-2.

Insulation Type: General Purpose PVC, Heat Resistant PVC, Flame Retardant PVC, Flame Retardant Low Smoke Material

Insulation Colour: RED, YELLOW, BLUE, BLACK, GREEN/YELLOW and all other colours as per ZS 688/SANS 1507

Voltage Rating: 600/1000V

Maximum Conductor Temperature: 70°C, 85°C, 105°C

Short Circuit Rating: 160°C

Single Core Building Wires with Solid Copper Conductor having Voltage Rating 600/1000V

Physical Parameters

Nominal Cross Section Area of Conductor (Sqmm)	Conductor Configuration		Nominal Thickness of the Insulation (mm)	Overall Diameter of Insulated Wire (mm)	Current Carrying Capacity in Air (Amps)	Maximum DC Resistance at 20°C (Ohm/KM)	Minimum Insulation Resistance at 23°C (MΩ-KM)	Approximate Weight of Finished Insulated Wire (Kg/KM)
	Nos. of Wires/ Wire Size (Nos./mm)	Solid Conductor Diameter Approx. (mm)						
1.00	1/1.13	1.13	0.80	2.60	15	18.10	25	19
1.50	1/1.38	1.38	0.80	3.00	19	12.10	24	22
2.50	1/1.78	1.78	0.80	3.40	27	7.41	20	32
4.00	1/2.25	2.25	1.00	4.25	35	4.61	19	51
6.00	1/2.78	2.78	1.00	4.80	45	3.08	17	72

Single Core Building Wires with Stranded Copper Conductor having Voltage Rating 600/1000V

Physical Parameters

Nominal Cross Section Area of Conductor (Sqmm)	Conductor Configuration		Nominal Thickness of the Insulation (mm)	Overall Diameter of Insulated Wire (mm)	Current Carrying Capacity in Air (Amps)	Maximum DC Resistance at 20°C (Ohm/KM)	Minimum Insulation Resistance at 23°C (MΩ-KM)	Approximate Weight of Finished Insulated Wire (Kg/KM)
	Nos. of Wires/ Wire Size (Nos./mm)	Stranded Conductor Diameter Approx. (mm)						
1.00	7/0.43	1.29	0.80	2.90	15	18.10	25	20
1.50	7/0.53	1.59	0.80	3.20	19	12.10	24	23
2.50	7/0.67	2.01	0.80	3.60	27	7.41	20	34
4.00	7/0.85	2.55	1.00	4.55	35	4.61	19	53
6.00	7/1.04	3.12	1.00	5.10	45	3.08	17	76
10.00	7/1.35	4.05	1.00	6.00	62	1.83	14	117
16.00	7/1.70	5.10	1.00	7.00	87	1.15	11	175
25.00	7/2.14	6.42	1.20	9.00	116	0.727	11	271
35.00	7/2.52	7.56	1.20	10.10	139	0.524	9	367
50.00	7/3.00	9.00	1.40	12.00	171	0.387	9	518
70.00	19/2.16	10.80	1.40	13.80	220	0.268	8	710
95.00	19/2.52	12.60	1.60	16.00	273	0.193	8	962
120.00	19/2.84	14.20	1.60	17.60	313	0.153	7	1205
150.00	19/3.16	15.80	1.80	19.60	365	0.124	7	1500
185.00	37/2.52	17.64	2.00	21.80	429	0.0991	7	1860
240.00	37/2.86	20.02	2.20	24.60	507	0.0754	7	2400
300.00	37/3.20	22.40	2.40	27.40	582	0.0601	7	2996
400.00	61/2.88	25.92	2.60	31.50	673	0.0470	6	3955



Single Core Flexible Wires



Product Application: Wiring of Control Panel, Industrial Wiring, Domestic Wiring, Wiring for lightning Circuits & Appliances.

Product Standard: As per SANS 1574

Type of Conductor: Flexible (Class 5) as per SANS 1411-1

Type of Insulation Material: PVC as per SANS: 1411-2

Insulation Type: Flexible Grade PVC as per SANS 1411-2

Insulation Colour: RED, YELLOW, BLUE, BLACK, GREEN/YELLOW and all other colours as per SANS 1574

Voltage Rating: 600/1000V

Maximum Conductor Temperature: 70°C, 85°C, 105°C

Short Circuit Rating: 160°C

Single Core Flexible Wires with Flexible Copper Conductor having Voltage Rating 300/500V

Physical Parameters

Nominal Cross Section Area of Conductor	Maximum Diameter of Wires in Conductor	Nominal Thickness of the Insulation	Maximum Overall Diameter of Insulated Wire	Current Rating in Air	Maximum DC Resistance at 20°C	Insulation Resistance at 23°C	Weight of Finished Cable Approx
(Sqmm)	(mm)	(mm)	(mm)	(Amps)	(Ohm/KM)	(MΩ-KM)	(Kg/KM)
0.50	0.21	0.60	2.20	7	39.00	0.012	10
0.75	0.21	0.60	2.40	12	26.00	0.011	13
1.00	0.21	0.60	2.60	15	19.50	0.010	16
1.50	0.26	0.70	3.10	18	13.30	0.010	21
2.50	0.26	0.80	3.80	26	7.98	0.009	31

Single Core Flexible Wires with Flexible Copper Conductor having Voltage Rating 450/750V

Physical Parameters

Nominal Cross Section Area of Conductor	Maximum Diameter of Wires in Conductor	Nominal Thickness of the Insulation	Maximum Overall Diameter of Insulated Wire	Current Rating in Air	Maximum DC Resistance at 20°C	Insulation Resistance at 23°C	Weight of Finished Cable Approx
(Sqmm)	(mm)	(mm)	(mm)	(Amps)	(Ohm/KM)	(MΩ-KM)	(Kg/KM)
1.50	0.26	0.70	3.10	18	13.30	0.0100	21
2.50	0.26	0.80	3.80	26	7.98	0.0090	31
4.00	0.31	0.80	4.20	34	4.95	0.0074	46
6.00	0.31	0.80	4.90	44	3.30	0.0061	75
10.00	0.41	1.00	6.30	61	1.91	0.0061	125
16.00	0.41	1.00	7.50	82	1.21	0.0051	199
25.00	0.41	1.00	8.80	113	0.78	0.0051	299



Single Core Flexible Wires with Flexible Copper Conductor having Voltage Rating 600/1000V

Nominal Cross Section Area of Conductor	Max. Diameter of Flexible Wire Strand in Conductor	Nominal Thickness of the Insulation	Maximum Overall Diameter of Insulated Wire	Current Carrying Capacity in Air	Maximum DC Resistance at 20°C	Minimum Insulation Resistance at 23°C	Approximate Weight of Finished Insulated Wire
(Sqmm)	(mm)	(mm)	(mm)	(Amps)	(Ohm/KM)	(MΩ-KM)	(Kg/KM)
0.50	0.21	0.80	2.70	7	39.00	0.012	12
0.75	0.21	0.80	2.90	12	26.00	0.011	15
1.00	0.21	0.80	3.10	15	19.50	0.010	18
1.50	0.26	0.80	3.40	18	13.30	0.010	21
2.50	0.26	0.80	3.80	26	7.98	0.009	31
4.00	0.31	1.00	4.70	34	4.95	0.0074	52
6.00	0.31	1.00	5.20	44	3.30	0.0061	75
10.00	0.41	1.00	6.40	61	1.91	0.0061	120
16.00	0.41	1.00	7.80	82	1.21	0.0051	180
25.00	0.41	1.20	9.70	113	0.78	0.0047	280
35.00	0.41	1.20	11.10	136	0.554	0.0040	370
50.00	0.41	1.40	13.10	168	0.386	0.0038	520
70.00	0.51	1.40	15.20	214	0.272	0.0034	730
95.00	0.51	1.60	17.70	261	0.206	0.0033	980
120.00	0.51	1.60	19.50	305	0.161	0.0033	1220
150.00	0.51	1.80	21.70	352	0.129	0.0030	1530
185.00	0.51	2.00	24.40	421	0.106	0.0029	1890

Twinflex Ripcord



Product Application: Can be used in Alarm Systems, Intercom, Audio System and Lighting Appliances

Product Standard: SANS 1574-2

Type of Conductor: Flexible copper (Class 6) conductors to SANS:1411-1

Type of Insulation Material: General Purpose and Special Requirement HR,FR

Insulation Type: PVC (Polyvinyl Chloride) as per SANS: 1411-2

Insulation Colour: 2 Core insulated with White or Black with Ridge Identification

Voltage Rating: 300/300V

Temperature Rating: -5°C to +70°C

Short Circuit Rating: 160°C

PVC Insulated and Flexible Ripcord Cable.Rated Voltage 300/300V

Physical Parameters

Nominal Cross Section Area of Conductor	Maximum Wire Diameter in Conductor	Nominal Thickness of the Insulation	Approximate Overall Diameter of Cable	Current Rating	AC Voltage Drop	Maximum DC Resistance at 20°C	Minium Insulation Resistance at 23°C	Approximate Weight of Finished Cable
(Sqmm)	(mm)	(mm)	(mm x mm)	(Amps)	(mV/A/m)	(Ohm/Km)	(MΩ-km,Min)	(Kg/KM)
0.50	0.20	0.60	2.5 X 5.0	3	93	39.00	0.012	22
0.75	0.20	0.60	2.8 X 5.5	6	62	26.00	0.011	29
1.00	0.20	0.60	3.2 X 6.2	10	46	19.50	0.010	38
1.50	0.20	0.70	3.4 X 6.8	16	32	13.30	0.010	48
2.50	0.20	0.80	3.8 X 7.7	25	19	7.98	0.009	70
4.00	0.20	0.80	4.8 X 9.5	32	12	4.95	0.0074	110



Twin Flat Cable With Earth Continuity Conductor



Product Application: Used in Domestic wiring, fixed installations in dry or damp premises clipped to surfaces, on trays or in free air where the risk of mechanical damage is minimal. Suitable for laying in conduit or trunking where mechanical protection is required.

Product Standard: As per SANS 1507-2, ZS 688-2

Type of Conductor: Solid (Class 1) & Stranded (Class 2) plain copper conductors as per SANS:1411-1

Type of Insulation Material: PVC (Polyvinyl Chloride) as per & SANS: 1411-2

Insulation Type: General Purpose PVC, HR & FR PVC on Request

Insulation Colour: RED & BLACK or BLUE & BROWN

Outer Sheath Material: PVC (Polyvinyl Chloride) as per SANS: 1411-2, IEC:60502-1

Types of Sheath: General Purpose PVC, LSFR or LHFR on Request

Outer Sheath Colour: Grey or White

Voltage Rating: 300/500V

Temperature Rating: -15°C to +70°C (Special Requirement -15°C to +105°C)

Short Circuit Rating: 160°C

PVC Insulated and Sheathed Twin Flat Cables with Earth Continuity Conductor 300/500V

Physical Parameters

Number of Core and Nominal Cross Section Area of Conductor (Nos. x Sqmm)	Conductors		Nominal Thickness of Insulation (mm)	Nominal Thickness of Outer Sheath (mm)	Nominal Cross Section Area of Earth Continuity Conductor (Sqmm)	Overall Diameter of Cable		Approximate Weight of Finished Cable (Kg/KM)
	Number of Wires in Conductor/Size (Nos./mm)	Approximate Diameter of Conductor (mm)				Lower Limit (mm x mm)	Upper Limit (mm x mm)	
2 X 1.00	1/1.13	1.13	0.60	0.90	1.0	4.0 X 7.2	4.7 X 8.6	69
2 X 1.00	7/0.43	1.29	0.60	0.90	1.0	4.0 X 7.2	4.7 X 8.6	72
2 X 1.50	1/1.38	1.38	0.70	0.90	1.0	4.4 X 8.2	5.4 X 9.6	86
2 X 1.50	7/0.53	1.59	0.70	0.90	1.0	4.4 X 8.2	5.4 X 9.6	92
2 X 2.50	1/1.78	1.78	0.80	1.00	1.5	5.2 X 9.8	6.2 X 11.5	126
2 X 2.50	7/0.67	2.01	0.80	1.00	1.5	5.2 X 9.8	6.2 X 11.5	130
2 X 4.00	7/0.85	2.55	0.80	1.10	1.5	5.6 X 10.5	7.2 X 13.0	198
2 X 6.00	7/1.04	3.12	0.80	1.10	2.5	6.4 X 12.5	8.0 X 15.0	255
2 X 10.00	7/1.35	4.05	0.90	1.20	4.0	7.8 X 15.5	9.6 X 19.0	390
2 X 16.00	7/1.70	5.10	0.90	1.30	6.0	9.0 X 18.0	11.0 X 22.0	568

Electrical Parameters

Cable Size (Sqmm)	Current Rating (Clipped Direct) (Amps)	Maximum DC Resistance at 20°C (Ohm/Km)	Insulation Resistance at 23°C (MΩ-km,Min)
1.00	16	18.10	10
1.50	21	12.10	10
2.50	30	7.41	10
4.00	39	4.61	10
6.00	50	3.08	10
10.00	68	1.83	10
16.00	93	1.15	10



Surfix Cables



Product Application: Used for wiring in roof spaces, hollow walls, Under -plastering and surface wiring.

Product Standard: As per SANS 1507-2, ZS 688-2

Type of Conductor: Plain copper (Class 1 & 2) conductors as per SANS:1411-1

Type of Insulation Material: PVC (Polyvinyl Chloride) as per SANS: 1411-2

Insulation Type: General Purpose PVC, HR PVC, FR PVC

Insulation Colour: (i) 2 Core : RED, BLACK

(ii) 3 Core : RED, YELLOW, BLUE

(iii) 4 Core: RED, YELLOW, BLUE, BLACK

Screening: Laid up Cores are screened with Aluminium Mylar tape which is helically applied with the metallic side down, in electrical contact with a annealed tinned copper earth continuity Conductor

Type of Outer Sheath: General Purpose PVC, Low Smoke Flame Retardant Material (LSFR) on request

Outer Sheath Colour: White or Black

Voltage Rating: 300/500V

Temperature Rating: -15°C to +70°C (Specical Requirement -15°C to +105°C)

Short Circuit Rating: 160°C

PVC Insulated and Sheathed Surfix Cables with Tinned Copper Earth Continuity Conductors 300/500V

Physical Parameters

Number of Core and Nominal Cross Section Area of Conductor (Nos. x Sqmm)	Conductor		Nominal Thickness of Insulation (mm)	Nominal Thickness of Outer Sheath (mm)	Cross Section Area of Earth Continuity Conductor (Sqmm)	Approximate Overall Diameter of Cable (mm)	Approximate Weight of Finished Cable (Kg/Km)
	Number & Size of Wires in Conductor (No./mm)	Approximate Diameter of Conductor (mm)					
2 X 1.50	7/0.53	1.59	0.70	0.90	1.00	8.0	108
2 X 2.50	7/0.67	2.01	0.80	1.00	1.50	9.0	146
2 X 4.00	7/0.85	2.55	0.80	1.10	1.50	10.2	210
2 X 6.00	7/1.05	3.15	0.80	1.10	2.50	11.5	260
3 X 1.50	7/0.53	1.59	0.70	0.90	1.00	8.2	112
3 X 2.50	7/0.67	2.01	0.80	1.00	1.50	9.5	160
3 X 4.00	7/0.85	2.55	0.80	1.10	1.50	11.0	213
3 X 6.00	7/1.05	3.15	0.80	1.10	2.50	12.2	290
4 X 1.50	7/0.53	1.59	0.70	1.00	1.00	8.9	135
4 X 2.50	7/0.67	2.01	0.80	1.10	1.50	10.3	195
4 X 4.00	7/0.85	2.55	0.80	1.20	1.50	12.0	268
4 X 6.00	7/1.05	3.15	0.80	1.20	2.50	12.8	338

Electrical Properties

Cable Size (Sqmm)	Current Rating (Clipped Direct) (Amps)	Maximum DC Resistance at 20°C		Insulation Resistance at 23°C (MΩ-km,Min)
		Phase (Ohm/Km)	Earth	
1.50	17	12.10	18.20	10
2.50	23	7.41	12.20	10
4.00	30	4.61	12.20	10
6.00	38	3.08	7.56	10

Multicore Flexible Cables



Multicore Flexible Cables 600/1000V

Product Application: Used in Industrial applications, Secondary side connections, Heavy duty portable supply, Fixed Wiring applications at 600/1000V power supply.

Product Standard: As per SANS 1574

Type of Conductor: Flexible (Class 5) as per SANS 1411-1

Type of Insulation Material: PVC as per SANS:1411-2

Insulation Type: Flexible Grade PVC suitable to flexible conductors

Core Colours: (i) 2 Core: Red, Black; (ii) 3 Core: Red, Yellow, Blue; (iii) 4 Core: Red, Yellow, Blue, Black; (iv) 5 Core: Red, Yellow, Blue, Black, Grey; (v) 5 Core & above: Cores are either Grey or Black with serial numbers printing for core identification

Outer Sheath: PVC as per SANS: 1411-2

Type of Outer Sheath: General Purpose Flexible Grade PVC with FR, LSFR, ZHLSFR Properties

Outer Sheath Colour: BLACK

Voltage Grade: 600/1000V

Temperature Rating: -5°C to +70°C

Short Circuit Rating: 160°C

Multicore Flexible Cable With FLEXIBLE Copper Conductor having Voltage Rating 600/1000V

Nominal Cross Section Area of Conductor	Maximum Diameter of Stranding Wire in Conductor	Nominal Thickness of PVC Insulation	2Core		3Core		4Core	
			Nominal Thickness of Outer Sheath	Approximate Overall Cable Diameter	Nominal Thickness of Outer Sheath	Approximate Overall Cable Diameter	Nominal Thickness of Outer Sheath	Approximate Overall Cable Diameter
(Sqmm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
1.50	0.26	0.80	1.60	9.50	1.60	10.30	1.60	11.15
2.50	0.26	0.80	1.60	10.80	1.60	11.32	1.60	12.28
4.00	0.31	1.00	1.60	12.60	1.60	13.32	1.80	14.90
6.00	0.31	1.00	1.80	14.15	1.80	15.00	1.80	16.35
10.00	0.41	1.00	1.80	16.00	1.80	16.98	1.80	18.56
16.00	0.41	1.00	1.80	19.56	1.80	20.80	1.80	22.86
25.00	0.41	1.20	2.00	23.70	2.00	25.20	2.00	27.75
35.00	0.41	1.20	2.00	26.52	2.00	28.30	2.00	31.20
50.00	0.41	1.40	2.00	30.55	2.00	32.65	2.20	36.56
70.00	0.51	1.40	2.20	35.05	2.20	37.50	2.20	41.45

Multicore Flexible Cables 450/750V

Product Application: Used in Industrial Applications wherein the flexibility is required such as Heavy-duty portable supply for Motor Connections and other similar usage.

Product Standard: As per SANS 1574

Type of Conductor: Flexible (Class 5) as per SANS 1411-1

Type of Insulation Material: PVC as per SANS:1411-2

Insulation Type: Flexible Grade PVC suitable to flexible conductors

Core Colours: (i) 2 Core: Blue, Brown; (ii) 3 Core: Blue, Brown, Green/Yellow; (iii) 4 Core: Blue, Brown, Black, Green/Yellow; (iv) 5 Core: Blue, Brown, Black, Grey, Green/Yellow; (v) 5 Core & above: Either Grey/Black core with serial numbers printing for identification

Outer Sheath: PVC as per SANS: 1411-2

Type of Outer Sheath: General Purpose Flexible Grade PVC



Multicore Flexible Cables 450/750V

Outer Sheath Colour: WHITE

Voltage Grade: 450/750V

Temperature Rating: -5°C to +70°C

Short Circuit Rating: 160°C

Multicore Flexible Cable With FLEXIBLE Copper Conductor having Voltage Rating 450/750V

Nominal Cross Section Area of Conductor (Sqmm)	Maximum Diameter of Stranding Wire in Conductor (mm)	Nominal Thickness of PVC Insulation (mm)	2Core		3Core		4Core	
			Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)	Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)	Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
1.50	0.26	0.70	1.60	9.50	1.60	9.90	1.60	10.65
2.50	0.26	0.80	1.60	10.80	1.60	11.40	1.60	12.35
4.00	0.31	0.80	1.60	11.70	1.60	12.36	1.60	13.45
6.00	0.31	0.80	1.60	12.80	1.60	13.60	1.80	15.30
10.00	0.41	1.00	1.80	15.60	1.80	16.55	1.80	18.10
16.00	0.41	1.00	1.80	17.60	1.80	18.70	1.80	20.50
25.00	0.41	1.00	2.00	21.00	2.00	22.35	2.00	24.55

Multicore Flexible Cables 300/500V

Product Application: Used for Domestic Wiring Applications and Wiring of Lightning Circuits

Product Standard: As per SANS 1574

Type of Conductor: Flexible (Class 5) as per SANS 1411-1

Type of Insulation Material & Type: Flexible Grade PVC as per SANS:1411-2

Core Colours: (i) 2 Core: Blue, Brown; (ii) 3 Core: Blue, Brown, Green/Yellow; (iii) 4 Core: Blue, Brown, Black, Green/Yellow; (iv) 5 Core: Blue, Brown, Black, Grey, Green/Yellow; (v) 5 Core & above : Either Grey/Black core with serial numbers printing for identification

Outer Sheath: PVC as per SANS: 1411-2

Type of Outer Sheath: General Purpose Flexible Grade PVC

Outer Sheath Colour: WHITE

Voltage Grade: 300/500V

Temperature Rating: -5°C to +70°C

Short Circuit Rating: 160°C

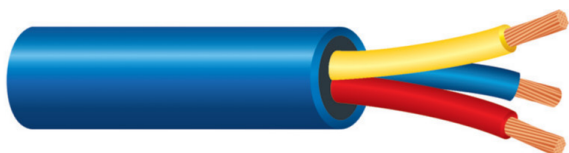
Multicore Flexible Cable With FLEXIBLE Copper Conductor Having Voltage Rating 300/500V

Physical Parameters

Nominal CSA of Conductor & Nos. of Cores (Sqmm x Cores)	Maximum Diameter of Stranding Wire in Conductor (mm)	Nominal Thickness of PVC Insulation (mm)	Nominal Thickness of Outer Sheath (mm)	Overall Diameter		Weight of Finished Cable Approx (Kg/KM)
				Minimum (mm)	Maximum (mm)	
0.50 x 2	0.21	0.60	0.80	5.60	7.00	50
0.75 x 2	0.21	0.60	0.80	5.70	7.20	54
1.00 x 2	0.21	0.60	0.80	5.90	7.50	68
1.50 x 2	0.26	0.70	0.80	6.80	8.60	89
2.50 x 2	0.26	0.80	1.00	8.40	10.60	137
0.50 x 3	0.21	0.60	0.80	5.80	7.20	55
0.75 x 3	0.21	0.60	0.80	6.00	7.60	69
1.00 x 3	0.21	0.60	0.80	6.30	8.00	80
1.50 x 3	0.26	0.70	0.90	7.40	9.40	110
2.50 x 3	0.26	0.80	1.10	9.20	11.40	164
0.50 x 4	0.21	0.60	0.80	6.60	8.30	66
0.75 x 4	0.21	0.60	0.80	6.90	8.60	80
1.00 x 4	0.21	0.60	0.90	7.10	9.00	98
1.50 x 4	0.26	0.70	1.00	8.40	10.50	138
2.50 x 4	0.26	0.80	1.10	10.10	12.50	205
0.50 x 5	0.21	0.60	0.90	7.00	8.90	80
0.75 x 5	0.21	0.60	0.90	7.40	9.30	98
1.00 x 5	0.21	0.60	0.90	7.80	9.80	115
1.50 x 5	0.26	0.70	1.10	9.30	11.60	162
2.50 x 5	0.26	0.80	1.20	11.20	13.90	244



Submersible Cables



Product Application: Used with Submersible Pumps in Agricultural Sector, Mining Sector and other similar applications wherein the cable is subjected to Water exposure.

Product Standard: As per SANS 1574

Type of Conductor: Flexible (Class 5) Conductor with Plain Copper as per SANS 1411-1

Type of Insulation Material: Flexible Grade waterproof PVC as per SANS:1411-2

Insulation Type: Flexible Grade PVC suitable to flexible conductors

Core Colours: (i) 3 Core: Red, Yellow, Blue (ii) 4 Core: Red, Yellow, Blue, Black

Outer Sheath: PVC as per SANS: 1411-2

Type of Outer Sheath: Flexible Grade waterproof PVC

Outer Sheath Colour: BLUE

Voltage Grade: 600/1000V

Temperature Rating: -5°C to +70°C

Short Circuit Rating: 160°C

PVC Insulated & Sheathed Submersible Cables with Circular & Flat Shape and having Voltage Rating 600/1000V

Physical Parameters

Nominal Cross Section Area of Conductor (Sqmm)	Maximum Diameter of Stranding Wire in Conductor (mm)	Nominal Thickness of PVC Insulation (mm)	2Core		3Core		4Core	
			Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)	Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)	Nominal Thickness of Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
1.50 Round	0.26	0.80	1.50	10.10	1.50	11.15	125	150
1.50 Flat	0.26	0.80	1.50	5.10 x 12.00	1.50	5.10 x 13.25	132	156
2.50 Round	0.26	0.80	1.80	11.90	1.80	12.90	170	200
2.50 Flat	0.26	0.80	1.80	5.80 x 14.80	1.80	5.80 x 18.85	180	210
4.00 Round	0.31	1.00	1.80	13.95	1.80	15.20	240	312
4.00 Flat	0.31	1.00	1.80	8.40 x 17.85	1.80	8.40 x 22.60	252	325
6.00 Round	0.31	1.00	1.80	12.20	1.80	16.60	340	450
6.00 Flat	0.31	1.00	1.80	9.00 x 19.60	1.80	9.00 x 24.96	354	462
10.00 Round	0.41	1.00	1.80	17.10	1.80	18.80	530	662
10.00 Flat	0.41	1.00	1.80	9.90 x 22.30	1.80	9.90 x 28.56	545	675

Welding Cable



Product Application: Used in electric automatic/Manual welding machine.

Product Standards: As per SANS 1576

Type of Conductor: Extra Flexible copper (Class 6) conductor as per SANS:1411-1

Conductor Material: Plain Copper or Tinned Copper

Type of Insulation Material: PVC Nitrile as per SANS: 1411-2

Insulation Colour: Red, Black and Other Colour Available on request

Outer Sheath Material: PVC Nitrile as per SANS: 1411-2

Sheath Colour: Red, Black and Other Colour Available on request

Voltage Rating: 100V

Temperature Rating: -15°C to +70°C

Short Circuit Rating: 160°C

PVC Nitrile Insulated and Sheathed Flexible Welding Cable 100V

Physical Parameters

Nominal Cross Section Area	Maximum Diameter of Wires in Conductor	Nominal Thickness of Insulation	Nominal Thickness of Outer Sheath	Approximate Overall Diameter of Cable	Maximum DC Resistance at 20°C Plain Wires	Maximum DC Resistance at 20°C Metal-Coated Wires
(Sqmm)	(mm)	(mm)	(mm)	(mm)	(Ohm/Km)	(Ohm/Km)
16.00	0.21	0.80	1.20	10.15	1.210	1.240
25.00	0.21	0.80	1.20	11.50	0.780	0.795
35.00	0.21	0.80	1.20	12.80	0.554	0.565
50.00	0.31	0.85	1.35	15.00	0.386	0.393
70.00	0.31	0.95	1.45	17.25	0.272	0.277
95.00	0.31	1.00	1.60	19.50	0.206	0.210
120.00	0.31	1.10	1.70	21.50	0.161	0.164

Electrical Parameters

Cable Size (Sqmm)	Class of Welding				Voltage Drop/100 (mV/A/m)
	Automatic		Manual		
	Semi-automatic				
	Maximum Current Rating (A) for duty cycles of				
	100%	85%	60%	30%	
16	110	120	140	200	1.448
25	140	150	180	255	0.993
35	185	200	240	340	0.633
50	230	250	295	420	0.462
70	290	315	375	530	0.325
95	350	380	450	640	0.246
120	405	440	525	740	0.193



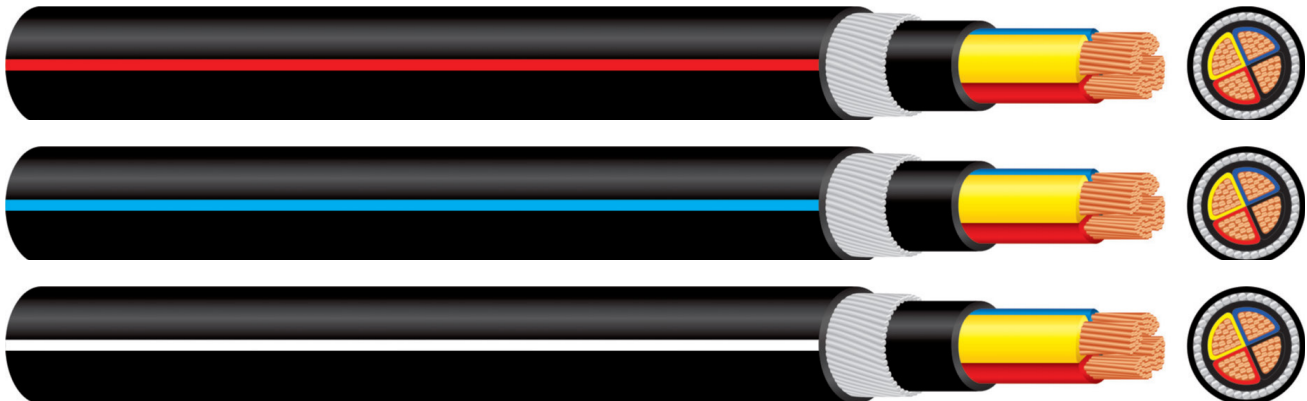
Low Voltage Power & Control Cables



Low Voltage Power and Control Cables

PVC/XLPE Insulated Low Voltage Power Cables with Copper/Aluminium Conductors upto 3.3kV

Product Application: The Power Cables are used for the distribution of electrical supply having voltage grades from 600/1000V to 1900/3300V. The LV Power Cables are well suited for the underground laying, outdoor installation and has an extensive usage in the Industrial applications wherein the enhanced chemical & mechanical protection is of prime importance. Also, based on the type of Outer Sheathing materials the LV Power Cables are categorised as Flame Retardant (FR), Flame Retardant Low Smoke (LHFR) and Flame Retardant Zero Halogen Low Smoke (ZHLSFR).



Product Standards: As per ZS 688, SANS 1507, IEC 60502-1

Construction Overview:

CONDUCTOR:

Conductor Material: Aluminium or Copper

Type of Conductor: Stranded Conductor (Class-2) as per ZS 756-1, SANS 1411-1, IEC 60228

Conductor Shape: Round or Shaped

CONDUCTOR INSULATION:

Insulation Material: Polyvinyl Chloride (PVC) as per ZS 756-2, SANS 1411-2, IEC 60502-1 and Cross-Linked Polyethylene (XLPE) as per ZS 752-4, SANS 1411-4, IEC 60502-1

Core Colours for Identification: (i) 1Core: Red or Yellow or Blue or Black; (ii) 2Core: Red and Black; (iii) 3Core: Red, Yellow and Blue; (d) 4Core: Red, Yellow, Blue and Black; (e) 5Core: Red, Yellow, Blue, Black and Grey; (f) Above 5Core: Grey or Black Core with Number Printing

INNER BEDDING:

Bedding Material: Polyvinyl Chloride (PVC) with Flame Retardant Property, Low Halogen Flame Retardant Low Smoke (LHFR) and Zero Halogen Low Smoke Flame Retardant (ZHLSFR) material.

Reference Specification: As per ZS 756-2 & 5, SANS 1411-2 & 5 and IEC 60502-1

ARMOURING:

Material: Aluminium Wire for Single Core Cables and Galvanised Steel Wires for Multicore Cables

Reference Specification: As per ZS 756-6, SANS 1411-6, IEC 60502-1

OUTER SHEATH:

Material: PVC with Flame Retardant Property (RED Stripe), LHFR (Blue Stripe) and ZHLSFR (White Stripe)

Reference Specification: As per ZS 756-2 & 5, SANS 1411-2 & 5, IEC 60502-1



PVC/XLPE Insulated Low Voltage Power Cables with Copper/ Aluminium Conductors upto 3.3kV

1Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Aluminium Wire Armour (AWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Aluminium Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
50	6	6	1.40	0.80	1.25	1.50	19.00
70	12	12	1.40	0.80	1.25	1.60	21.00
95	15	15	1.60	0.80	1.25	1.60	23.20
120	18	15	1.60	1.00	1.60	1.70	26.10
150	18	15	1.80	1.00	1.60	1.70	28.10
185	30	30	2.00	1.00	1.60	1.80	30.60
240	34	30	2.20	1.00	1.60	1.90	33.90
300	34	30	2.40	1.00	1.60	1.90	36.80
400	53	53	2.60	1.20	2.00	2.10	41.80
500	53	53	2.80	1.20	2.00	2.10	45.40
630	53	53	2.80	1.20	2.00	2.20	49.50
800	53	53	2.80	1.40	2.50	2.40	55.60
1000	53	53	3.00	1.40	2.50	2.50	61.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable	Single Core Cable (Approx)				
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
50	165	155	150	130	120	115	0.828	1.35	0.11	1.03	0.387	0.641	5.75	3.8
70	205	190	175	155	140	135	0.587	0.94	0.103	1.21	0.268	0.443	8.05	5.32
95	245	220	200	190	175	155	0.442	0.691	0.101	1.27	0.193	0.320	10.925	7.22
120	280	250	220	220	195	170	0.365	0.558	0.098	1.42	0.153	0.253	13.8	9.12
150	320	280	245	250	220	190	0.314	0.464	0.094	1.42	0.124	0.206	17.25	11.4
185	370	305	260	290	240	210	0.268	0.383	0.092	1.44	0.0991	0.164	21.275	14.06
240	425	345	285	335	270	225	0.229	0.31	0.09	1.53	0.0754	0.125	27.6	18.24
300	475	375	310	380	295	245	0.206	0.265	0.088	1.56	0.0601	0.100	34.5	22.8
400	550	400	335	435	325	275	0.191	0.230	0.088	1.59	0.0470	0.0778	41.12	27.2
500	590	425	355	480	345	295	0.178	0.210	0.087	1.67	0.0366	0.0605	51.4	34
630	660	470	375	550	390	320	0.166	0.185	0.086	1.67	0.0283	0.0469	64.764	42.84
800	745	530	425	620	450	380	0.161	0.173	0.083	1.75	0.0221	0.0367	82.24	54.4
1000	870	590	470	700	500	415	0.156	0.163	0.082	1.94	0.0176	0.0291	102.8	68



PVC/XLPE Insulated Low Voltage Power Cables with Copper/ Aluminium Conductors upto 3.3kV

1Core XLPE Insulated LV Power Cable with Copper/Aluminium Conductor, Aluminium Wire Armour (AWA), PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Aluminium Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
50	6	6	1.00	0.80	0.90	1.50	18.50
70	12	12	1.10	0.80	1.25	1.50	20.50
95	15	15	1.10	0.80	1.25	1.60	22.50
120	18	15	1.20	0.80	1.25	1.60	23.50
150	18	15	1.40	1.00	1.60	1.70	26.50
185	30	30	1.60	1.00	1.60	1.80	28.50
240	34	30	1.70	1.00	1.60	1.80	31.50
300	34	30	1.80	1.00	1.60	1.90	34.50
400	53	53	2.00	1.20	2.00	2.00	38.50
500	53	53	2.20	1.20	2.00	2.10	42.50
630	53	53	2.40	1.20	2.00	2.20	46.50
800	53	53	2.60	1.40	2.50	2.40	53.00
1000	53	53	2.80	1.40	2.50	2.50	58.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable	Single Core Cable (Approx)				
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
50	215	185	165	170	138	125	0.828	1.35	0.114	0.5	0.387	0.641	7.15	4.7
70	270	225	200	210	168	155	0.587	0.94	0.106	0.55	0.268	0.443	10.01	6.58
95	330	265	235	255	168	185	0.442	0.691	0.102	0.64	0.193	0.320	13.585	8.93
120	380	300	265	300	230	210	0.365	0.558	0.097	0.67	0.153	0.253	17.16	11.28
150	430	335	300	342	265	230	0.314	0.464	0.099	0.67	0.124	0.206	21.45	14.1
185	495	380	335	385	295	260	0.268	0.383	0.095	0.67	0.0991	0.164	26.455	17.39
240	590	435	385	450	340	300	0.229	0.31	0.093	0.72	0.0754	0.125	34.32	22.56
300	670	490	430	510	390	335	0.206	0.265	0.092	0.75	0.0601	0.100	42.9	28.2
400	780	550	480	605	450	380	0.191	0.230	0.090	0.75	0.0470	0.0778	57.2	37.6
500	900	610	530	700	500	430	0.178	0.210	0.089	0.77	0.0366	0.0605	71.5	47
630	1020	680	590	809	555	485	0.166	0.185	0.087	0.81	0.0283	0.0469	90.09	59.22
800	1140	740	630	935	625	530	0.161	0.173	0.086	0.88	0.0221	0.0367	114.4	75.2
1000	1250	780	660	1065	690	570	0.156	0.163	0.085	0.88	0.0176	0.0291	143	94



PVC/XLPE Insulated Low Voltage Power Cables with Copper/ Aluminium Conductors upto 3.3kV

1Core PVC Insulated LV Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
50	6	6	1.40	0.80	1.40	16.50
70	12	12	1.40	0.80	1.40	17.80
95	15	15	1.60	0.80	1.50	20.50
120	18	15	1.60	1.00	1.50	21.20
150	18	15	1.80	1.00	1.60	24.40
185	30	30	2.00	1.00	1.70	26.50
240	34	30	2.20	1.00	1.80	30.00
300	34	30	2.40	1.00	1.90	33.00
400	53	53	2.60	1.20	2.00	38.00
500	53	53	2.80	1.20	2.10	41.40
630	53	53	2.80	1.20	2.20	45.20
800	53	53	2.80	1.40	2.30	50.00
1000	53	53	3.00	1.40	2.50	55.20
1000	53	53	2.80	1.40	2.50	2.50

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable	Single Core Cable (Approx)				
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
50	165	155	150	130	120	115	0.828	1.35	0.098	1.22	0.387	0.641	5.75	3.8
70	205	190	175	155	140	135	0.587	0.94	0.092	1.43	0.268	0.443	8.05	5.32
95	245	220	200	190	175	155	0.442	0.691	0.090	1.47	0.193	0.320	10.925	7.22
120	280	250	220	220	195	170	0.365	0.558	0.089	1.62	0.153	0.253	13.8	9.12
150	320	280	245	250	220	190	0.314	0.464	0.088	1.62	0.124	0.206	17.25	11.4
185	370	305	260	290	240	210	0.268	0.383	0.086	1.62	0.0991	0.164	21.275	14.06
240	425	345	285	335	270	225	0.229	0.31	0.084	1.72	0.0754	0.125	27.6	18.24
300	475	375	310	380	295	245	0.206	0.265	0.084	1.74	0.0601	0.100	34.5	22.8
400	550	400	335	435	325	275	0.191	0.230	0.082	1.81	0.0470	0.0778	41.12	27.2
500	590	425	355	480	345	295	0.178	0.210	0.081	1.86	0.0366	0.0605	51.4	34
630	660	470	375	550	390	320	0.166	0.185	0.078	1.87	0.0283	0.0469	64.764	42.84
800	745	530	425	620	450	380	0.161	0.173	0.077	1.98	0.0221	0.0367	82.24	54.4
1000	870	590	470	700	500	415	0.156	0.163	0.077	2.2	0.0176	0.0291	102.8	68



PVC/XLPE Insulated Low Voltage Power Cables with Copper/ Aluminium Conductors upto 3.3kV

1Core XLPE Insulated LV Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
16	6	6	0.70	0.80	1.40	9.00
25	6	6	0.90	0.80	1.40	11.00
35	6	6	0.90	0.80	1.40	12.00
50	6	6	1.00	0.80	1.40	13.00
70	12	12	1.10	0.80	1.40	15.00
95	15	15	1.10	0.80	1.50	17.00
120	18	15	1.20	0.80	1.50	19.00
150	18	15	1.40	1.00	1.60	21.00
185	30	30	1.60	1.00	1.60	23.00
240	34	30	1.70	1.00	1.70	26.00
300	34	30	1.80	1.00	1.80	28.00
400	53	53	2.00	1.20	1.90	32.00
500	53	53	2.20	1.20	2.00	35.00
630	53	53	2.40	1.20	2.20	40.00
800	53	53	2.60	1.40	2.30	44.00
1000	53	53	2.80	1.40	2.40	49.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable	Single Core Cable (Approx)				
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
16	106	104	102	83	81	80	2.94	4.90	0.103	0.5	1.15	1.91	2.288	1.504
25	145	130	115	115	99	90	1.86	3.08	0.103	0.52	0.727	1.20	3.575	2.35
35	155	155	140	135	117	110	1.35	2.23	0.098	0.6	0.524	0.868	5.005	3.29
50	215	185	165	170	138	125	0.828	1.35	0.093	0.63	0.387	0.641	7.15	4.7
70	270	225	200	210	168	155	0.587	0.94	0.088	0.68	0.268	0.443	10.01	6.58
95	330	265	235	255	204	185	0.442	0.691	0.086	0.79	0.193	0.320	13.585	8.93
120	380	300	265	300	230	210	0.365	0.558	0.085	0.79	0.153	0.253	17.16	11.28
150	430	335	300	342	265	230	0.314	0.464	0.085	0.79	0.124	0.206	21.45	14.1
185	495	380	335	385	295	260	0.268	0.383	0.083	0.79	0.0991	0.164	26.455	17.39
240	590	435	385	450	340	300	0.229	0.31	0.082	0.84	0.0754	0.125	34.32	22.56
300	670	490	430	510	390	335	0.206	0.265	0.079	0.86	0.0601	0.100	42.9	28.2
400	780	550	480	605	450	380	0.191	0.230	0.080	0.88	0.0470	0.0778	57.2	37.6
500	900	610	530	700	500	430	0.178	0.210	0.078	0.9	0.0366	0.0605	71.5	47
630	1020	680	590	809	555	485	0.166	0.185	0.078	0.94	0.0283	0.0469	90.09	59.22
800	1140	740	630	935	825	530	0.161	0.173	0.076	0.97	0.0221	0.0367	114.4	75.2
1000	1250	780	660	1065	690	570	0.156	0.163	0.075	1.01	0.0176	0.0291	143	94



PVC/XLPE Insulated Low Voltage Power Cables with Copper/ Aluminium Conductors upto 3.3kV

2Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.5	6	6	0.80	0.80	0.90	1.40	13.00
2.5	6	6	0.80	0.80	0.90	1.40	13.50
4	6	6	1.00	0.80	0.90	1.40	15.50
6	6	6	1.00	0.80	0.90	1.50	17.00
10	6	6	1.00	0.80	1.25	1.60	19.50
16	6	6	1.00	0.80	1.25	1.60	21.50
25	6	6	1.20	1.00	1.60	1.70	22.00
35	6	6	1.20	1.00	1.60	1.80	24.00
50	6	6	1.40	1.00	1.60	1.90	27.00
70	12	12	1.40	1.00	1.60	1.90	30.00
95	15	15	1.60	1.20	2.00	2.10	34.00
120	18	15	1.60	1.20	2.00	2.20	36.50
150	18	15	1.80	1.20	2.00	2.30	40.00
185	30	30	2.00	1.40	2.50	2.40	43.20
240	34	30	2.20	1.40	2.50	2.50	51.00
300	34	30	2.40	1.60	2.50	2.70	56.00
400	53	53	2.60	1.60	2.50	2.90	64.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable					
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	---	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	15	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	20	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	28	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	41	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	52	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	66	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	80	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	155	150	130	120	115	0.828	1.35	0.082	0.49	5.75	3.8	0.387	0.641
70	205	190	175	155	140	135	0.587	0.94	0.076	0.56	8.05	5.32	0.268	0.443
95	245	220	200	190	175	155	0.442	0.691	0.076	0.58	10.925	7.22	0.193	0.320
120	280	250	220	220	195	170	0.365	0.558	0.075	0.63	13.8	9.12	0.153	0.253
150	320	280	245	250	220	190	0.314	0.464	0.074	0.63	17.25	11.4	0.124	0.206
185	370	305	260	290	240	210	0.268	0.383	0.074	0.64	21.275	14.06	0.0991	0.164
240	425	345	285	335	270	225	0.229	0.31	0.073	0.67	27.6	18.24	0.0754	0.125
300	475	375	310	380	295	245	0.206	0.265	0.072	0.68	34.5	22.8	0.0601	0.100
400	550	400	335	435	325	275	0.191	0.230	0.072	0.70	41.12	27.2	0.0470	0.0778



2Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.5	6	6	0.70	0.80	0.90	1.40	13.00
2.5	6	6	0.70	0.80	0.90	1.40	14.00
4	6	6	0.70	0.80	0.90	1.40	15.00
6	6	6	0.70	0.80	0.90	1.40	16.00
10	6	6	0.70	0.80	0.90	1.50	18.00
16	6	6	0.70	0.80	1.25	1.50	20.00
25	6	6	0.90	0.80	1.25	1.60	20.00
35	6	6	0.90	1.00	1.60	1.70	23.00
50	6	6	1.00	1.00	1.60	1.80	25.00
70	12	12	1.10	1.00	1.60	1.90	28.00
95	15	15	1.10	1.20	2.00	2.00	32.00
120	18	15	1.20	1.20	2.00	2.10	34.00
150	18	15	1.40	1.20	2.00	2.20	38.00
185	30	30	1.60	1.40	2.50	2.40	42.00
240	34	30	1.70	1.40	2.50	2.50	49.00
300	34	30	1.80	1.60	2.50	2.60	53.00
400	53	53	2.00	1.60	2.50	2.80	58.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil		Single Core Cable					
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



2Core PVC Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.80	0.80	1.80	11.00
2.5	6	6	0.80	0.80	1.80	12.00
4	6	6	1.00	0.80	1.80	14.00
6	6	6	1.00	0.80	1.80	15.00
10	6	6	1.00	0.80	1.80	17.00
16	6	6	1.00	0.80	1.80	19.00
25	6	6	1.20	1.00	1.80	18.50
35	6	6	1.20	1.00	1.80	20.50
50	6	6	1.40	1.00	1.80	23.50
70	12	12	1.40	1.00	1.90	26.00
95	15	15	1.60	1.20	2.00	29.00
120	18	15	1.60	1.20	2.10	31.00
150	18	15	1.80	1.20	2.20	35.00
185	30	30	2.00	1.40	2.40	37.00
240	34	30	2.20	1.40	2.60	45.00
300	34	30	2.40	1.60	3.70	50.00
400	53	53	2.60	1.60	3.00	56.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil													
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	---	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	18	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	27	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	34	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	45	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	58	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	76	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	92	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	165	150	130	135	115	0.828	1.35	0.082	0.49	5.75	3.8	5.75	3.8
70	205	205	180	155	160	140	0.587	0.94	0.076	0.56	8.05	5.32	8.05	5.32
95	245	240	215	190	190	170	0.442	0.691	0.076	0.58	10.925	7.22	10.925	7.22
120	280	275	235	220	210	190	0.365	0.558	0.075	0.63	13.8	9.12	13.8	9.12
150	320	310	270	250	240	210	0.314	0.464	0.074	0.63	17.25	11.4	17.25	11.4
185	370	350	300	290	275	240	0.268	0.383	0.074	0.64	21.275	14.06	21.275	14.06
240	425	405	345	335	320	275	0.229	0.31	0.073	0.67	27.6	18.24	27.6	18.24
300	475	450	385	380	355	305	0.206	0.265	0.072	0.68	34.5	22.8	34.5	22.8
400	550	490	485	435	385	345	0.191	0.230	0.072	0.70	41.12	27.2	41.12	27.2



2Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.70	0.80	1.80	10.50
2.5	6	6	0.70	0.80	1.80	11.50
4	6	6	0.70	0.80	1.80	12.50
6	6	6	0.70	0.80	1.80	13.50
10	6	6	0.70	0.80	1.80	15.00
16	6	6	0.70	0.80	1.80	16.00
25	6	6	0.90	1.00	1.80	17.00
35	6	6	0.90	1.00	1.80	18.00
50	6	6	1.00	1.00	1.80	21.00
70	12	12	1.10	1.00	1.80	23.00
95	15	15	1.10	1.20	2.00	26.00
120	18	15	1.20	1.20	2.10	28.00
150	18	15	1.40	1.40	2.20	32.00
185	30	30	1.60	1.40	2.30	34.00
240	34	30	1.70	1.40	2.50	41.00
300	34	30	1.80	1.60	2.70	45.00
400	53	53	2.00	1.60	2.90	51.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20° C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(μF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



3Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.5	6	6	0.80	0.80	0.90	1.40	14.00
2.5	6	6	0.80	0.80	0.90	1.40	15.00
4	6	6	1.00	0.80	0.90	1.40	16.50
6	6	6	1.00	0.80	1.25	1.50	19.00
10	6	6	1.00	0.80	1.25	1.60	21.00
16	6	6	1.00	0.80	1.25	1.60	23.00
25	6	6	1.20	1.00	1.60	1.70	24.50
35	6	6	1.20	1.00	1.60	1.80	27.00
50	6	6	1.40	1.00	1.60	1.90	31.00
70	12	12	1.40	1.20	2.00	2.00	35.00
95	15	15	1.60	1.20	2.00	2.10	39.00
120	18	15	1.60	1.20	2.00	2.20	44.00
150	18	15	1.80	1.40	2.50	2.40	49.00
185	30	30	2.00	1.40	2.50	2.50	51.00
240	34	30	2.20	1.60	2.50	2.60	58.50
300	34	30	2.40	1.60	2.50	2.80	64.50
400	53	53	2.60	1.60	2.50	3.00	69.00

Electrical Properties

Nominal Cross Section Area	Current Rating						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil													
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	---	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	15	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	20	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	28	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	41	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	52	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	66	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	80	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	155	150	130	120	115	0.828	1.35	0.082	0.49	5.75	3.8	0.387	0.641
70	205	190	175	155	140	135	0.587	0.94	0.076	0.56	8.05	5.32	0.268	0.443
95	245	220	200	190	175	155	0.442	0.691	0.076	0.58	10.925	7.22	0.193	0.320
120	280	250	220	220	195	170	0.365	0.558	0.075	0.63	13.8	9.12	0.153	0.253
150	320	280	245	250	220	190	0.314	0.464	0.074	0.63	17.25	11.4	0.124	0.206
185	370	305	260	290	240	210	0.268	0.383	0.074	0.64	21.275	14.06	0.0991	0.164
240	425	345	285	335	270	225	0.229	0.31	0.073	0.67	27.6	18.24	0.0754	0.125
300	475	375	310	380	295	245	0.206	0.265	0.072	0.68	34.5	22.8	0.0601	0.100
400	550	400	335	435	325	275	0.191	0.230	0.072	0.70	41.12	27.2	0.0470	0.0778



3Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.5	6	6	0.70	0.80	0.90	1.40	13.50
2.5	6	6	0.70	0.80	0.90	1.40	14.50
4	6	6	0.70	0.80	0.90	1.40	15.50
6	6	6	0.70	0.80	0.90	1.40	17.50
10	6	6	0.70	0.80	1.25	1.50	19.00
16	6	6	0.70	0.80	1.25	1.60	21.00
25	6	6	0.90	1.00	1.60	1.70	23.00
35	6	6	0.90	1.00	1.60	1.80	25.00
50	6	6	1.00	1.00	1.60	1.80	28.00
70	12	12	1.10	1.00	1.60	1.90	32.00
95	15	15	1.10	1.20	2.00	2.10	36.00
120	18	15	1.20	1.20	2.00	2.20	40.00
150	18	15	1.40	1.40	2.50	2.30	45.00
185	30	30	1.60	1.40	2.50	2.40	48.00
240	34	30	1.70	1.40	2.50	2.60	54.00
300	34	30	1.80	1.60	2.50	2.70	60.00
400	53	53	2.00	1.60	2.50	2.90	64.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



3Core PVC Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.80	0.80	1.80	12.00
2.5	6	6	0.80	0.80	1.80	13.00
4	6	6	1.00	0.80	1.80	15.00
6	6	6	1.00	0.80	1.80	16.50
10	6	6	1.00	0.80	1.80	18.50
16	6	6	1.00	0.80	1.80	20.00
25	6	6	1.20	1.00	1.80	22.00
35	6	6	1.20	1.00	1.80	24.00
50	6	6	1.40	1.00	1.80	27.50
70	12	12	1.40	1.20	2.00	31.00
95	15	15	1.60	1.20	2.10	35.00
120	18	15	1.60	1.20	2.20	38.00
150	18	15	1.80	1.40	2.30	42.00
185	30	30	2.00	1.40	2.50	44.00
240	34	30	2.20	1.60	2.70	51.00
300	34	30	2.40	1.60	2.90	57.00
400	53	53	2.60	1.60	3.10	62.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil													
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	---	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	18	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	27	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	34	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	45	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	58	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	76	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	92	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	165	150	130	135	115	0.828	1.35	0.082	0.49	5.75	3.8	5.75	3.8
70	205	205	180	155	160	140	0.587	0.94	0.076	0.56	8.05	5.32	8.05	5.32
95	245	240	215	190	190	170	0.442	0.691	0.076	0.58	10.925	7.22	10.925	7.22
120	280	275	235	220	210	190	0.365	0.558	0.075	0.63	13.8	9.12	13.8	9.12
150	320	310	270	250	240	210	0.314	0.464	0.074	0.63	17.25	11.4	17.25	11.4
185	370	350	300	290	275	240	0.268	0.383	0.074	0.64	21.275	14.06	21.275	14.06
240	425	405	345	335	320	275	0.229	0.31	0.073	0.67	27.6	18.24	27.6	18.24
300	475	450	385	380	355	305	0.206	0.265	0.072	0.68	34.5	22.8	34.5	22.8
400	550	490	485	435	385	345	0.191	0.230	0.072	0.70	41.12	27.2	41.12	27.2



3Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.70	0.80	1.80	11.00
2.5	6	6	0.70	0.80	1.80	12.00
4	6	6	0.70	0.80	1.80	13.00
6	6	6	0.70	0.80	1.80	14.00
10	6	6	0.70	0.80	1.80	16.00
16	6	6	0.70	0.80	1.80	18.00
25	6	6	0.90	1.00	1.80	18.00
35	6	6	0.90	1.00	1.80	21.00
50	6	6	1.00	1.00	1.80	23.00
70	12	12	1.10	1.00	1.90	27.00
95	15	15	1.10	1.20	2.00	30.00
120	18	15	1.20	1.20	2.10	34.00
150	18	15	1.40	1.40	2.30	38.00
185	30	30	1.60	1.40	2.40	40.00
240	34	30	1.70	1.40	2.60	47.00
300	34	30	1.80	1.60	2.80	52.00
400	53	53	2.00	1.60	3.10	57.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20° C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



4Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.50	6	6	0.80	0.80	0.90	1.40	14.50
2.50	6	6	0.80	0.80	0.90	1.40	16.00
4	6	6	1.00	0.80	1.25	1.50	18.00
6	6	6	1.00	0.80	1.25	1.50	20.50
10	6	6	1.00	0.80	1.25	1.60	23.50
16	6	6	1.00	1.00	1.60	1.70	26.50
25	6	6	1.20	1.00	1.60	1.80	28.50
35	6	6	1.20	1.00	1.60	1.90	31.00
50	6	6	1.40	1.20	2.00	2.00	35.00
70	12	12	1.40	1.20	2.00	2.10	39.00
95	15	15	1.60	1.20	2.00	2.20	43.50
120	18	15	1.60	1.40	2.50	2.40	50.50
150	18	15	1.80	1.40	2.50	2.50	54.50
185	30	30	2.00	1.60	2.50	2.60	60.50
240	34	30	2.20	1.60	2.50	2.80	66.00
300	34	30	2.40	1.60	2.50	3.00	72.00
400	53	53	2.60	1.80	3.15	3.30	83.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(μF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	----	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	15	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	20	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	28	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	41	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	52	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	66	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	80	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	155	150	130	120	115	0.828	1.35	0.082	0.49	5.75	3.8	0.387	0.641
70	205	190	175	155	140	135	0.587	0.94	0.076	0.56	8.05	5.32	0.268	0.443
95	245	220	200	190	175	155	0.442	0.691	0.076	0.58	10.925	7.22	0.193	0.320
120	280	250	220	220	195	170	0.365	0.558	0.075	0.63	13.8	9.12	0.153	0.253
150	320	280	245	250	220	190	0.314	0.464	0.074	0.63	17.25	11.4	0.124	0.206
185	370	305	260	290	240	210	0.268	0.383	0.074	0.64	21.275	14.06	0.0991	0.164
240	425	345	285	335	270	225	0.229	0.31	0.073	0.67	27.6	18.24	0.0754	0.125
300	475	375	310	380	295	245	0.206	0.265	0.072	0.68	34.5	22.8	0.0601	0.100
400	550	400	335	435	325	275	0.191	0.230	0.072	0.70	41.12	27.2	0.0470	0.0778



4Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
1.50	6	6	0.70	0.80	0.90	1.40	14.00
2.50	6	6	0.70	0.80	0.90	1.40	15.00
4	6	6	0.70	0.80	0.90	1.40	16.00
6	6	6	0.70	0.80	1.25	1.50	18.00
10	6	6	0.70	0.80	1.25	1.50	21.00
16	6	6	0.70	0.80	1.25	1.60	23.00
25	6	6	0.90	1.00	1.60	1.70	26.00
35	6	6	0.90	1.00	1.60	1.80	29.00
50	6	6	1.00	1.00	1.60	1.90	31.00
70	12	12	1.10	1.20	2.00	2.10	37.00
95	15	15	1.10	1.20	2.00	2.20	40.00
120	18	15	1.20	1.40	2.50	2.30	47.00
150	18	15	1.40	1.40	2.50	2.40	51.00
185	30	30	1.60	1.40	2.50	2.60	56.00
240	34	30	1.70	1.60	2.50	2.70	62.00
300	34	30	1.80	1.60	2.50	2.90	68.00
400	53	53	2.00	1.60	3.15	3.20	78.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



4Core PVC Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.80	0.80	1.80	13.00
2.5	6	6	0.80	0.80	1.80	14.50
4	6	6	1.00	0.80	1.80	16.50
6	6	6	1.00	0.80	1.80	18.00
10	6	6	1.00	0.80	1.80	20.50
16	6	6	1.00	1.00	1.80	22.50
25	6	6	1.20	1.00	1.80	25.00
35	6	6	1.20	1.00	1.80	27.00
50	6	6	1.40	1.20	1.90	30.00
70	12	12	1.40	1.20	2.10	34.00
95	15	15	1.60	1.20	2.20	38.00
120	18	15	1.60	1.40	2.40	43.00
150	18	15	1.80	1.40	2.50	47.50
185	30	30	2.00	1.60	2.70	52.50
240	34	30	2.20	1.60	2.90	59.00
300	34	30	2.40	1.60	3.10	66.00
400	53	53	2.60	1.80	3.40	74.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al		
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
1.5	20	23	20	16	18	16	28.96	---	0.110	0.20	0.1725	0.114	12.1	18.1
2.5	27	32	27	21	25	18	17.74	---	0.103	0.22	0.2875	0.19	7.41	12.1
4	35	41	35	27	32	27	11.04	---	0.098	0.23	0.46	0.304	4.61	7.41
6	45	50	44	35	40	34	7.38	---	0.096	0.28	0.69	0.456	3.08	4.61
10	60	70	58	47	55	45	4.38	---	0.091	0.34	1.15	0.76	1.83	3.08
16	78	90	75	59	70	58	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	76	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	92	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	165	150	130	135	115	0.828	1.35	0.082	0.49	5.75	3.8	5.75	3.8
70	205	205	180	155	160	140	0.587	0.94	0.076	0.56	8.05	5.32	8.05	5.32
95	245	240	215	190	190	170	0.442	0.691	0.076	0.58	10.925	7.22	10.925	7.22
120	280	275	235	220	210	190	0.365	0.558	0.075	0.63	13.8	9.12	13.8	9.12
150	320	310	270	250	240	210	0.314	0.464	0.074	0.63	17.25	11.4	17.25	11.4
185	370	350	300	290	275	240	0.268	0.383	0.074	0.64	21.275	14.06	21.275	14.06
240	425	405	345	335	320	275	0.229	0.31	0.073	0.67	27.6	18.24	27.6	18.24
300	475	450	385	380	355	305	0.206	0.265	0.072	0.68	34.5	22.8	34.5	22.8
400	550	490	485	435	385	345	0.191	0.230	0.072	0.70	41.12	27.2	41.12	27.2



4Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium				
1.5	6	6	0.70	0.80	1.80	11.00
2.5	6	6	0.70	0.80	1.80	12.00
4	6	6	0.70	0.80	1.80	14.00
6	6	6	0.70	0.80	1.80	15.00
10	6	6	0.70	0.80	1.80	17.00
16	6	6	0.70	0.80	1.80	19.00
25	6	6	0.90	1.00	1.80	21.00
35	6	6	0.90	1.00	1.80	24.00
50	6	6	1.00	1.00	1.90	26.00
70	12	12	1.10	1.20	2.00	30.00
95	15	15	1.10	1.20	2.10	34.00
120	18	15	1.20	1.40	2.30	39.00
150	18	15	1.40	1.40	2.40	43.00
185	30	30	1.60	1.40	2.60	49.00
240	34	30	1.70	1.60	2.80	55.00
300	34	30	1.80	1.60	30.00	60.00
400	53	53	2.00	1.60	3.30	68.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(μF/KM)	(Ohm/KM)		kA(RMS)	
1.5	22	22	20	14	16	12	26.73	---	0.102	0.09	12.1	18.1	0.2145	0.141
2.5	30	29	27	18	20	16	16.37	---	0.100	0.1	7.41	12.1	0.3575	0.235
4.0	39	44	37	30	34	28	10.19	---	0.098	0.11	4.61	7.41	0.572	0.376
6.0	50	55	47	40	43	37	6.81	---	0.09	0.13	3.08	4.61	0.858	0.564
10	67	74	61	53	57	48	4.04	---	0.084	0.16	1.83	3.08	1.43	0.94
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



3.5Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors		Minimum Nos. of Strands in Conductor		Nominal Thickness of the PVC Insulation		Nominal Thickness of Inner Sheath/ Bedding	Nominal Diameter of Galvanised Steel Wire used in Armour	Nominal Thickness of the Outer Sheath	Approximate Overall Cable Diameter
Phase	Neutral	Cu	Al	Phase	Neutral				
(Sqmm)		(Nos)		(mm)		(mm)	(mm)	(mm)	(mm)
25	16	6	6	1.20	1.00	1.00	1.60	1.80	28.00
35	16	6	6	1.20	1.00	1.00	1.60	1.90	30.50
50	25	6	6	1.40	1.20	1.00	2.00	2.00	34.00
70	35	12	12	1.40	1.20	1.20	2.00	2.10	39.00
95	50	15	15	1.60	1.40	1.20	2.00	2.30	43.50
120	70	18	15	1.60	1.40	1.40	2.50	2.50	50.00
150	70	18	15	1.80	1.40	1.40	2.50	2.60	54.00
185	95	30	30	2.00	1.60	1.40	2.50	2.70	60.00
240	120	34	30	2.20	1.60	1.60	2.50	2.90	66.00
300	150	34	30	2.40	1.80	1.60	2.50	3.10	72.00
400	185	53	53	2.60	2.00	1.80	3.15	3.40	83.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
25	105	115	97	78	90	66	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	80	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	155	150	130	120	115	0.828	1.35	0.082	0.49	5.75	3.8	0.387	0.641
70	205	190	175	155	140	135	0.587	0.94	0.076	0.56	8.05	5.32	0.268	0.443
95	245	220	200	190	175	155	0.442	0.691	0.076	0.58	10.925	7.22	0.193	0.320
120	280	250	220	220	195	170	0.365	0.558	0.075	0.63	13.8	9.12	0.153	0.253
150	320	280	245	250	220	190	0.314	0.464	0.074	0.63	17.25	11.4	0.124	0.206
185	370	305	260	290	240	210	0.268	0.383	0.074	0.64	21.275	14.06	0.0991	0.164
240	425	345	285	335	270	225	0.229	0.31	0.073	0.67	27.6	18.24	0.0754	0.125
300	475	375	310	380	295	245	0.206	0.265	0.072	0.68	34.5	22.8	0.0601	0.100
400	550	400	335	435	325	275	0.191	0.230	0.072	0.70	41.12	27.2	0.0470	0.0778



3.5Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors		Minimum Nos. of Strands in Conductor		Nominal Thickness of the XLPE Insulation		Nominal Thickness of Inner Sheath/ Bedding	Nominal Diameter of Galvanised Steel Wire used in Armour	Nominal Thickness of the Outer Sheath	Approximate Overall Cable Diameter
Phase	Neutral	Cu	Al	Phase	Neutral				
(Sqmm)		(Nos)		(mm)		(mm)	(mm)	(mm)	(mm)
25	16	6	6	0.90	0.70	1.00	1.60	1.80	26.00
35	16	6	6	0.90	0.70	1.00	1.60	1.90	29.00
50	25	6	6	1.00	0.90	1.00	1.60	1.90	31.00
70	35	12	12	1.10	0.90	1.20	2.00	2.10	37.00
95	50	15	15	1.10	1.00	1.20	2.00	2.20	40.00
120	70	18	15	1.20	1.10	1.20	2.00	2.40	46.00
150	70	18	15	1.40	1.10	1.40	2.50	2.50	51.00
185	95	30	30	1.60	1.10	1.40	2.50	2.70	57.00
240	120	34	30	1.70	1.20	1.60	2.50	2.90	63.00
300	150	34	30	1.80	1.40	1.60	2.50	3.00	68.00
400	185	53	53	2.00	1.60	1.60	3.15	3.30	77.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



3.5Core PVC Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors		Minimum Nos. of Strands in Conductor		Nominal Thickness of the PVC Insulation		Nominal Thickness of Inner Sheath/ Bedding	Nominal Thickness of the Outer Sheath	Approximate Overall Cable Diameter
Phase	Neutral	Cu	Al	Phase	Neutral			
(Sqmm)		(Nos)		(mm)		(mm)	(mm)	(mm)
25	16	6	6	1.20	1.00	1.00	1.80	24.00
35	16	6	6	1.20	1.00	1.00	1.80	26.50
50	25	6	6	1.40	1.20	1.00	1.90	29.00
70	35	12	12	1.40	1.20	1.20	2.00	33.00
95	50	15	15	1.60	1.40	1.20	2.20	37.50
120	70	18	15	1.60	1.40	1.40	2.30	43.00
150	70	18	15	1.80	1.40	1.40	2.40	47.00
185	95	30	30	2.00	1.60	1.40	2.60	52.50
240	120	34	30	2.20	1.60	1.60	2.80	59.00
300	150	34	30	2.40	1.80	1.60	3.00	65.00
400	185	53	53	2.60	2.00	1.80	3.20	73.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Short Circuit Rating for 1 Sec.		Maximum DC Resistance at 20°C	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
Amps(A)	105	115	97	78	90	76	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	92	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	165	150	130	135	115	0.828	1.35	0.082	0.49	5.75	3.8	5.75	3.8
70	205	205	180	155	160	140	0.587	0.94	0.076	0.56	8.05	5.32	8.05	5.32
95	245	240	215	190	190	170	0.442	0.691	0.076	0.58	10.925	7.22	10.925	7.22
120	280	275	235	220	210	190	0.365	0.558	0.075	0.63	13.8	9.12	13.8	9.12
150	320	310	270	250	240	210	0.314	0.464	0.074	0.63	17.25	11.4	17.25	11.4
185	370	350	300	290	275	240	0.268	0.383	0.074	0.64	21.275	14.06	21.275	14.06
240	425	405	345	335	320	275	0.229	0.31	0.073	0.67	27.6	18.24	27.6	18.24
300	475	450	385	380	355	305	0.206	0.265	0.072	0.68	34.5	22.8	34.5	22.8
400	550	490	485	435	385	345	0.191	0.230	0.072	0.70	41.12	27.2	41.12	27.2



3.5Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, UNARMoured, PVC Outer Sheath, 600/1000V (1.1kV)

Physical Parameters

Nominal Cross Section Area of Conductors		Minimum Nos. of Strands in Conductor		Nominal Thickness of the XLPE Insulation		Nominal Thickness of Inner Sheath/ Bedding	Nominal Thickness of the Outer Sheath	Approximate Overall Cable Diameter
Phase	Neutral	Cu	Al	Phase	Neutral			
(Sqmm)		(Nos)		(mm)		(mm)	(mm)	(mm)
25	16	6	6	0.90	0.70	1.00	1.80	21.00
35	16	6	6	0.90	0.70	1.00	1.80	24.00
50	25	6	6	1.00	0.90	1.00	1.80	26.00
70	35	12	12	1.10	0.90	1.20	1.90	30.00
95	50	15	15	1.10	1.00	1.20	2.10	34.00
120	70	18	15	1.20	1.10	1.20	2.20	39.00
150	70	18	15	1.40	1.10	1.40	2.30	43.00
185	95	30	30	1.60	1.10	1.40	2.50	49.00
240	120	34	30	1.70	1.20	1.60	2.70	54.00
300	150	34	30	1.80	1.40	1.60	2.90	60.00
400	185	53	53	2.00	1.60	1.60	3.10	68.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance for Cable (APPROX)	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



1Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Aluminium Wire Armoured (AWA), PVC Outer Sheath, 1900/3300 V (3.3kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Aluminium Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
50	6	6	2.20	0.80	1.25	1.60	20.50
70	12	12	2.20	0.80	1.25	1.60	22.00
95	15	15	2.20	1.00	1.60	1.70	25.00
120	18	15	2.20	1.00	1.60	1.70	26.50
150	18	15	2.20	1.00	1.60	1.80	28.00
185	30	30	2.20	1.00	1.60	1.80	29.50
240	34	30	2.20	1.00	1.60	1.90	32.50
300	34	30	2.40	1.00	1.60	1.90	35.00
400	53	53	2.60	1.20	2.00	2.10	39.50
500	53	53	2.80	1.20	2.00	2.10	43.00
630	53	53	2.80	1.20	2.00	2.20	47.00
800	53	53	2.80	1.40	2.50	2.40	53.00
1000	53	53	3.00	1.40	2.50	2.50	58.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
50	165	155	150	130	120	115	0.828	1.35	0.11	1.03	0.387	0.641	5.75	3.8
70	205	190	175	155	140	135	0.587	0.94	0.103	1.21	0.268	0.443	8.05	5.32
95	245	220	200	190	175	155	0.442	0.691	0.101	1.27	0.193	0.320	10.925	7.22
120	280	250	220	220	195	170	0.365	0.558	0.098	1.42	0.153	0.253	13.8	9.12
150	320	280	245	250	220	190	0.314	0.464	0.094	1.42	0.124	0.206	17.25	11.4
185	370	305	260	290	240	210	0.268	0.383	0.092	1.44	0.0991	0.164	21.275	14.06
240	425	345	285	335	270	225	0.229	0.31	0.09	1.53	0.0754	0.125	27.6	18.24
300	475	375	310	380	295	245	0.206	0.265	0.088	1.56	0.0601	0.100	34.5	22.8
400	550	400	335	435	325	275	0.191	0.230	0.088	1.59	0.0470	0.0778	41.12	27.2
500	590	425	355	480	345	295	0.178	0.210	0.087	1.67	0.0366	0.0605	51.4	34
630	660	470	375	550	390	320	0.166	0.185	0.086	1.67	0.0283	0.0469	64.764	42.84
800	745	530	425	620	450	380	0.161	0.173	0.083	1.75	0.0221	0.0367	82.24	54.4
1000	870	590	470	700	500	415	0.156	0.163	0.082	1.94	0.0176	0.0291	102.8	68



1Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Aluminium Wire Armoured (AWA), PVC Outer Sheath, 1900/3300 V (3.3kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Aluminium Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
50	6	6	2.00	0.80	1.25	1.60	20.50
70	12	12	2.00	0.80	1.25	1.60	22.50
95	15	15	2.00	0.80	1.25	1.60	23.50
120	18	15	2.00	1.00	1.60	1.70	26.50
150	18	15	2.00	1.00	1.60	1.70	27.50
185	30	30	2.00	1.00	1.60	1.80	29.50
240	34	30	2.00	1.00	1.60	1.90	32.50
300	34	30	2.00	1.00	1.60	2.00	34.50
400	53	53	2.00	1.20	2.00	2.10	38.50
500	53	53	2.20	1.20	2.00	2.20	42.50
630	53	53	2.40	1.20	2.00	2.20	46.50
800	53	53	2.60	1.40	2.50	2.40	52.50
1000	53	53	2.80	1.40	2.50	2.50	57.50

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
50	215	185	165	170	138	125	0.828	1.35	0.114	0.5	0.387	0.641	7.15	4.7
70	270	225	200	210	168	155	0.587	0.94	0.106	0.55	0.268	0.443	10.01	6.58
95	330	265	235	255	204	185	0.442	0.691	0.102	0.64	0.193	0.320	13.585	8.93
120	380	300	265	300	230	210	0.365	0.558	0.097	0.67	0.153	0.253	17.16	11.28
150	430	335	300	342	265	230	0.314	0.464	0.099	0.67	0.124	0.206	21.45	14.1
185	495	380	335	385	295	260	0.268	0.383	0.095	0.67	0.0991	0.164	26.455	17.39
240	590	435	385	450	340	300	0.229	0.31	0.093	0.72	0.0754	0.125	34.32	22.56
300	670	490	430	510	390	335	0.206	0.265	0.092	0.75	0.0601	0.100	42.9	28.2
400	780	550	480	605	450	380	0.191	0.230	0.090	0.75	0.0470	0.0778	57.2	37.6
500	900	610	530	700	500	430	0.178	0.210	0.089	0.77	0.0366	0.0605	71.5	47
630	1020	680	590	809	555	485	0.166	0.185	0.087	0.81	0.0283	0.0469	90.09	59.22
800	1140	740	630	935	625	530	0.161	0.173	0.086	0.88	0.0221	0.0367	114.4	75.2
1000	1250	780	660	1065	690	570	0.156	0.163	0.085	0.88	0.0176	0.0291	143	94



3Core PVC Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 1900/3300 V (3.3kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
16	6	6	2.20	1.00	1.60	1.80	29.50
25	6	6	2.20	1.00	1.60	1.80	31.50
35	6	6	2.20	1.00	1.60	1.90	31.50
50	6	6	2.20	1.20	2.00	2.00	36.00
70	12	12	2.20	1.20	2.00	2.10	38.50
95	15	15	2.20	1.20	2.00	2.20	42.00
120	18	15	2.20	1.40	2.50	2.30	46.50
150	18	15	2.20	1.40	2.50	2.40	50.00
185	30	30	2.20	1.40	2.50	2.50	51.50
240	34	30	2.20	1.60	2.50	2.60	57.50
300	34	30	2.40	1.60	2.50	2.80	63.50
400	53	53	2.60	1.60	2.50	3.00	68.00

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20° C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
16	78	90	75	59	70	52	2.77	4.60	0.086	0.40	1.84	1.216	1.15	1.91
25	105	115	97	78	90	66	1.75	2.89	0.083	0.42	2.875	1.9	0.727	1.20
35	128	140	120	99	110	80	1.26	2.09	0.082	0.48	4.025	2.66	0.524	0.868
50	165	155	150	130	120	115	0.828	1.35	0.11	1.03	0.387	0.641	5.75	3.8
70	205	190	175	155	140	135	0.587	0.94	0.103	1.21	0.268	0.443	8.05	5.32
95	245	220	200	190	175	155	0.442	0.691	0.101	1.27	0.193	0.320	10.925	7.22
120	280	250	220	220	195	170	0.365	0.558	0.098	1.42	0.153	0.253	13.8	9.12
150	320	280	245	250	220	190	0.314	0.464	0.094	1.42	0.124	0.206	17.25	11.4
185	370	305	260	290	240	210	0.268	0.383	0.092	1.44	0.0991	0.164	21.275	14.06
240	425	345	285	335	270	225	0.229	0.31	0.09	1.53	0.0754	0.125	27.6	18.24
300	475	375	310	380	295	245	0.206	0.265	0.088	1.56	0.0601	0.100	34.5	22.8
400	550	400	335	435	325	275	0.191	0.230	0.088	1.59	0.0470	0.0778	41.12	27.2
500	590	425	355	480	345	295	0.178	0.210	0.087	1.67	0.0366	0.0605	51.4	34
630	660	470	375	550	390	320	0.166	0.185	0.086	1.67	0.0283	0.0469	64.764	42.84
800	745	530	425	620	450	380	0.161	0.173	0.083	1.75	0.0221	0.0367	82.24	54.4
1000	870	590	470	700	500	415	0.156	0.163	0.082	1.94	0.0176	0.0291	102.8	68



3Core XLPE Insulated Power Cable with Copper/Aluminium Conductor, Steel Wire Armoured (SWA), PVC Outer Sheath, 1900/3300 V (3.3kV)

Physical Parameters

Nominal Cross Section Area of Conductors (Sqmm)	Minimum Nos. of Strands in Conductor (Nos.)		Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Galvanised Steel Wire used in Armour (mm)	Nominal Thickness of the Outer Sheath (mm)	Approximate Overall Cable Diameter (mm)
	Copper	Aluminium					
16	6	6	2.00	1.00	1.60	1.80	28.50
25	6	6	2.00	1.00	1.60	1.80	31.50
35	6	6	2.00	1.00	1.60	1.90	30.50
50	6	6	2.00	1.20	2.00	2.00	34.50
70	12	12	2.00	1.20	2.00	2.10	37.50
95	15	15	2.00	1.20	2.00	2.20	40.50
120	18	15	2.00	1.40	2.50	2.30	45.50
150	18	15	2.00	1.40	2.50	2.40	48.50
185	30	30	2.00	1.40	2.50	2.50	50.50
240	34	30	2.00	1.60	2.50	2.60	56.50
300	34	30	2.00	1.60	2.50	2.70	61.50
400	53	53	2.00	1.60	2.50	2.90	64.50

Electrical Properties

Nominal Cross Section Area	Current Rating Amps(A)						Approx Voltage Drop of Single core cables		Reactance at 50 Hz	Capacitance	Maximum DC Resistance at 20°C		Short Circuit Rating for 1 Sec.	
	In Air	In Ground	In Duct	In Air	In Ground	In Duct								
	Single Core in Trefoil						Trefoil							
	Copper (Cu)			Aluminium (Al)			Cu	Al			Cu	Al	Cu	Al
(Sqmm)	Amps(A)						(V/A/KM)		(Ohm/KM)	(µF/KM)	(Ohm/KM)		kA(RMS)	
16	85	94	78	70	78	61	2.94	4.90	0.08	0.14	1.15	1.91	2.288	1.504
25	125	120	100	99	95	80	1.86	3.08	0.08	0.2	0.727	1.20	3.575	2.35
35	155	145	120	117	116	94	1.35	2.23	0.08	0.23	0.524	0.868	5.005	3.29
50	190	170	145	140	140	110	0.828	1.35	0.078	0.24	0.387	0.641	7.15	4.7
70	235	210	175	176	170	140	0.587	0.94	0.077	0.26	0.268	0.443	10.01	6.58
95	290	250	210	221	200	165	0.442	0.691	0.074	0.29	0.193	0.320	13.585	8.93
120	330	285	240	258	225	185	0.365	0.558	0.072	0.29	0.153	0.253	17.16	11.28
150	375	315	270	294	255	210	0.314	0.464	0.072	0.29	0.124	0.206	21.45	14.1
185	435	355	300	339	285	235	0.268	0.383	0.072	0.29	0.0991	0.164	26.455	17.39
240	510	410	350	402	325	270	0.229	0.31	0.072	0.31	0.0754	0.125	34.32	22.56
300	590	460	390	461	370	305	0.206	0.265	0.071	0.33	0.0601	0.100	42.9	28.2
400	670	520	440	542	435	350	0.191	0.230	0.07	0.33	0.0470	0.0778	57.2	37.6



PVC/XLPE Insulated Low Voltage Control Cables 600/1000V



1.5Sqmm PVC Insulated Multicore Control Cable with Copper Conductor, Galvanised Steel Wire (SWA), PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nos. of Core in 1.5Sqmm Control Cable (Nos.)	Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Steel Wire Armour (mm)	Nominal Thickness of Outer Sheath (mm)		Approximate Overall Diameter of Cable (mm)		Current Carrying Capacity in Air (Amp)	Reactance of Cable at 50 Hz (Ohm/KM)	Short Circuit Rating of Cable for 1Second duration (kA RMS)	Maximum DC Resistance of Conductor at 20°C (Ohm/KM)
				Arm	Unarm	Arm	Unarm				
5	0.80	0.80	0.90	1.40	1.80	16.00	14.50	20	0.110	0.173	12.10
6	0.80	0.80	0.90	1.40	1.80	18.00	15.00	15	0.110	0.173	12.10
7	0.80	0.80	0.90	1.40	1.80	18.00	15.00	14	0.110	0.173	12.10
10	0.80	0.80	1.25	1.50	1.80	20.50	17.00	13	0.110	0.173	12.10
12	0.80	0.80	1.25	1.50	1.80	22.00	18.50	12	0.110	0.173	12.10
14	0.80	0.80	1.25	1.50	1.80	23.00	19.50	11	0.110	0.173	12.10
16	0.80	0.80	1.25	1.50	1.80	24.00	20.50	11	0.110	0.173	12.10
19	0.80	0.80	1.25	1.60	1.80	26.00	22.00	10	0.110	0.173	12.10
24	0.80	1.00	1.60	1.70	1.80	29.00	24.00	9	0.110	0.173	12.10
27	0.80	1.00	1.60	1.70	1.80	30.50	25.50	9	0.110	0.173	12.10
30	0.80	1.00	1.60	1.70	1.80	32.00	27.00	9	0.110	0.173	12.10
37	0.80	1.00	1.60	1.80	1.80	34.00	29.00	8	0.110	0.173	12.10
44	0.80	1.00	1.60	1.80	1.90	36.00	31.00	7	0.110	0.173	12.10
52	0.80	1.20	1.60	1.90	1.90	39.00	35.00	7	0.110	0.173	12.10
61	0.80	1.20	1.60	2.00	2.00	42.00	39.00	6	0.110	0.173	12.10

2.5Sqmm PVC Insulated Multicore Control Cable with Copper Conductor, Galvanised Steel Wire (SWA), PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nos. of Core in 2.5Sqmm Control Cable (Nos.)	Nominal Thickness of the PVC Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Steel Wire Armour (mm)	Nominal Thickness of Outer Sheath (mm)		Approximate Overall Diameter of Cable (mm)		Current Carrying Capacity in Air (Amp)	Reactance of Cable at 50 Hz (Ohm/KM)	Short Circuit Rating of Cable for 1Second duration (kA RMS)	Maximum DC Resistance of Conductor at 20°C (Ohm/KM)
				Arm	Unarm	Arm	Unarm				
5	0.80	0.80	0.90	1.50	1.80	17.50	15.50	27	0.107	0.288	7.41
6	0.80	0.80	1.25	1.50	1.80	18.50	16.50	18	0.107	0.288	7.41
7	0.80	0.80	1.25	1.50	1.80	19.00	17.00	17	0.107	0.288	7.41
10	0.80	0.80	1.25	1.60	1.80	23.00	19.00	15	0.107	0.288	7.41
12	0.80	0.80	1.25	1.70	1.80	24.00	21.00	14	0.107	0.288	7.41
14	0.80	0.80	1.25	1.70	1.80	25.00	22.00	13	0.107	0.288	7.41
16	0.80	0.80	1.25	1.70	1.80	26.00	23.00	12	0.107	0.288	7.41
19	0.80	1.00	1.60	1.80	2.00	30.00	25.50	12	0.107	0.288	7.41
24	0.80	1.00	1.60	1.80	2.00	32.00	27.50	11	0.107	0.288	7.41
27	0.80	1.00	1.60	1.80	2.00	33.50	29.00	10	0.107	0.288	7.41
30	0.80	1.00	1.60	1.80	2.00	34.00	30.50	10	0.107	0.288	7.41
37	0.80	1.00	2.00	1.90	2.00	37.00	33.00	9	0.107	0.288	7.41
44	0.80	1.20	2.00	1.90	2.00	40.00	35.50	9	0.107	0.288	7.41
52	0.80	1.20	2.00	2.10	2.20	43.00	39.00	8	0.107	0.288	7.41
61	0.80	1.40	2.00	2.20	2.20	47.00	42.00	8	0.107	0.288	7.41



PVC/XLPE Insulated Low Voltage Control Cables 600/1000V

1.5Sqmm XLPE Insulated Multicore Control Cable with Copper Conductor, Galvanised Steel Wire (SWA), PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nos. of Core in 1.5Sqmm Control Cable (Nos.)	Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Nominal Diameter of Steel Wire Armour (mm)	Nominal Thickness of Outer Sheath (mm)		Approximate Overall Diameter of Cable (mm)		Current Carrying Capacity in Air (Amp)	Reactance of Cable at 50 Hz (Ohm/KM)	Short Circuit Rating of Cable for 1Second duration (kA RMS)	Maximum DC Resistance of Conductor at 20°C (Ohm/KM)
				Arm	Unarm	Arm	Unarm				
5	0.70	0.80	0.90	1.40	1.80	15.00	12	22	0.102	0.215	12.10
6	0.70	0.80	0.90	1.40	1.60	15.50	13	19	0.102	0.215	12.10
7	0.70	0.80	0.90	1.40	1.60	16.50	14	18	0.102	0.215	12.10
10	0.70	0.80	1.25	1.50	1.80	19.00	16	16	0.102	0.215	12.10
12	0.70	0.80	1.25	1.50	1.80	20.00	17	15	0.102	0.215	12.10
14	0.70	0.80	1.25	1.50	1.80	21.00	18	14	0.102	0.215	12.10
16	0.70	0.80	1.25	1.50	1.80	22.00	19	14	0.102	0.215	12.10
19	0.70	0.80	1.25	1.60	1.80	23.00	21	13	0.102	0.215	12.10
24	0.70	1.00	1.60	1.70	1.80	27.00	23	12	0.102	0.215	12.10
27	0.70	1.00	1.60	1.70	1.80	28.00	24	11	0.102	0.215	12.10
30	0.70	1.00	1.60	1.70	1.80	29.00	25	11	0.102	0.215	12.10
37	0.70	1.00	1.60	1.80	2.00	31.00	28	10	0.102	0.215	12.10
44	0.70	1.00	1.60	1.80	2.00	33.00	30	9	0.102	0.215	12.10
52	0.70	1.20	2.00	1.90	2.00	37.00	33	9	0.102	0.215	12.10
61	0.70	1.20	2.00	2.00	2.00	40.00	35	8	0.102	0.215	12.10

2.5Sqmm XLPE Insulated Multicore Control Cable with Copper Conductor, Galvanised Steel Wire (SWA), PVC Outer Sheath 600/1000V (1.1kV)

Physical Parameters

Nos. of Core in 2.5Sqmm Control Cable (Nos.)	Nominal Thickness of the XLPE Insulation (mm)	Nominal Thickness of Inner Sheath/ Bedding (mm)	Diameter of Steel Wire Armour (mm)	Nominal Thickness of Outer Sheath (mm)		Approximate Overall Diameter of Cable (mm)		Current Carrying Capacity in Air (Amp)	Reactance of Cable at 50 Hz (Ohm/KM)	Short Circuit Rating of Cable for 1Second duration (kA RMS)	Maximum DC Resistance of Conductor at 20°C (Ohm/KM)
				Arm	Unarm	Arm	Unarm				
5	0.70	0.80	0.90	1.40	1.80	16.0	13.0	30	0.100	0.3575	7.41
6	0.70	0.80	0.90	1.40	1.80	16.6	15.6	26	0.100	0.3575	7.41
7	0.70	0.80	0.90	1.40	1.80	17.4	16.4	25	0.100	0.3575	7.41
10	0.70	0.80	1.25	1.60	1.80	20.7	18.6	21	0.100	0.3575	7.41
12	0.70	0.80	1.25	1.60	1.80	22.0	19.9	20	0.100	0.3575	7.41
14	0.70	0.80	1.25	1.60	1.80	23.2	21.1	19	0.100	0.3575	7.41
16	0.70	0.80	1.25	1.60	1.80	24.3	22.2	18	0.100	0.3575	7.41
19	0.70	0.80	1.25	1.70	1.80	26.0	23.7	17	0.100	0.3575	7.41
24	0.70	1.00	1.60	1.80	1.80	29.6	26.4	16	0.100	0.3575	7.41
27	0.70	1.00	1.60	1.80	1.80	30.9	27.7	16	0.100	0.3575	7.41
30	0.70	1.00	1.60	1.80	2.00	32.1	29.3	14	0.100	0.3575	7.41
37	0.70	1.00	1.60	1.80	2.00	34.6	31.8	13	0.100	0.3575	7.41
44	0.70	1.00	1.60	1.80	2.00	37.0	34.2	13	0.100	0.3575	7.41
52	0.70	1.20	2.00	1.80	2.00	40.6	37.0	12	0.100	0.3575	7.41
61	0.70	1.20	2.00	2.00	2.20	43.6	40.0	11	0.100	0.3575	7.41



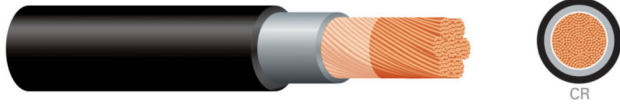
Product Range



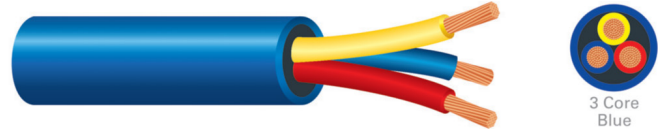
PVC/XLPE Insulated Low Voltage Control Cables 600/1000V



Low Voltage Power and Control Cables



Welding Cable



Submersible Cables



Surfix Cables



Multicore Flexible Cables



Twinflex Ripcord



Twin Flat Cable With Earth Continuity Conductor



Single Core Building Wires



MVXLPE Insulated Armoured Cables



Solar PV Cables



Three Core Medium Voltage Cables



Instrumentation Cables



Overhead Conductors



Aerial Bundle Cables



Enamelled Wires

Medium Voltage Cables

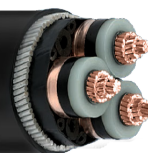


Uniflex Wires and Cables Limited



MVXLPE INSULATED ARMoured CABLES

Uniflex Wires and Cables Limited



Product Application: Power cables for medium voltage (upto 33KV) are used in - outdoor cable ducts, cable trays, conduits or underground locations under mechanical stresses in power and switching stations, local distribution systems and industrial plants

Physical Parameters

Standards	BS 6622 & IEC 60502-2
Operating temperature	90°C
Short circuit temperature	250°C
Cable range manufactured	19/33 KV Screened Cables (33 KV Earth) 12.7/22 KV Screened Cables (22 KV Earth) 11/11 KV i.e. 11 KV (UE) Screened Cables 6.6/6 KV Screened Cables [6.6 KV (UE) & 11 KV (E)] 3.8/6.6 KV Screened Cables 3.3 KV (E) and (UE) Unscreened / Screened Cables
Sizes	50 Sq.mm to 1000 Sq.mm in Single Core Cables 25 Sq.mm to 400 Sq.mm in Multi Cores Cables

Test Voltage

Rated Voltage	Test Voltage (for 5 min.)
Uo KV	RMS
3.8	11
6.35	15
8.7	22
12.7	30
19	45

CONSTRUCTION: Aluminium I Annealed Plain Copper Stranded compacted circular conductor conform to BS 6360 and IEC 60228, class 2

Conductor Screening : Semi-Conducting layer over conductor

Insulation: Cross linked Polyethylene to (XLPE)

Insulation Screening : Semi-Conducting layer over insulation, in combination with Copper tape.

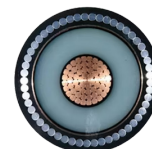
Core colour: Single Core - Natural

Multi Core - Numbered or colour polyster tapes applied over Copper tapes

Bedding Extruded PVC

Armour : Single Core - Non-magnetic (Aluminium) wire I Flat wire Multi core - Galvanised steel wire / Flat wire / Tape

Outer Sheath: Extruded PVC I Special PVC compound such as Flame Retardant (FR), Flame Retardant Low Smoke (FRLS), Low Smoke Zero Halogen (LSOH) can be used for outer sheath to suit a variety of environment and fire risk conditions. Flamability test confirms to IEC 332. For installation where fire and associated problems such as emission of smoke and toxic fumes offer a serious potential threat, special LSF (Low smoke & fumes) compound can be provided. LSF compound is Halogen free (Flourine, Chlorine, Bromine) when tested as per BS 6425 (Pt 1) & IEC 60754 (Pt 1). The acid gas evolved during combustion is less than 0.5% by weight of material.



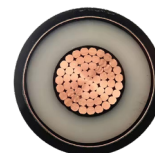
1 Core Cables - 3.6/6 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	2.5	1.2	1.6	1.8	23
35	2.5	1.2	1.6	1.8	24
50	2.5	1.2	1.6	1.8	26
70	2.5	1.2	1.6	1.8	27
95	2.5	1.2	1.6	1.9	29
120	2.5	1.2	1.6	1.9	30
150	2.5	1.2	1.6	2.0	32
185	2.5	1.2	2.0	2.0	34
240	2.6	1.2	2.0	2.1	37
300	2.8	1.2	2.0	2.2	40
400	3.0	1.2	2.0	2.3	43
500	3.2	1.3	2.5	2.5	48
630	3.2	1.4	2.5	2.6	55

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	262	0.32	0.4	142	196	400	590	936	1544	952	1554
35	0.524	0.868	5.0	3.30	291	0.35	0.4	133	187	390	580	579	1121	695	1131
50	0.387	0.641	7.15	4.72	321	0.39	0.5	121	179	380	570	511	834	527	844
70	0.268	0.443	10.01	6.61	371	0.45	0.6	115	173	370	550	364	583	386	597
95	0.193	0.32	13.58	8.97	417	0.50	0.6	110	168	350	540	272	427	300	446
120	0.153	0.253	17.16	11.33	459	0.55	0.7	107	165	340	520	225	345	257	367
150	0.124	0.206	21.45	14.16	494	0.59	0.7	103	161	330	510	193	287	229	313
185	0.0991	0.164	26.45	17.46	543	0.65	0.8	100	158	320	500	165	237	206	267
240	0.0754	0.125	34.32	22.66	583	0.70	0.9	97	155	310	490	140	191	185	226
300	0.0601	0.100	42.9	28.32	602	0.72	1.0	95	153	300	490	126	163	174	203
400	0.0470	0.0778	57.2	37.76	627	0.75	1.1	92	150	290	480	113	141	164	184
500	0.0366	0.0605	71.5	47.2	654	0.79	1.2	90	147	290	470	105	124	158	171
630	0.0283	0.0469	90.09	59.47	726	0.87	1.3	87	145	280	460	97	110	151	160



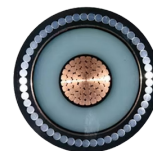
1 Core Cables - 3.6/6 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	2.5	1.5	18
35	2.5	1.6	19
50	2.5	1.6	21
70	2.5	1.6	22
95	2.5	1.7	24
120	2.5	1.7	26
150	2.5	1.8	27
185	2.5	1.8	29
240	2.6	1.9	32
300	2.8	2	34
400	3.0	2.1	38
500	3.2	2.2	42
630	3.2	2.3	46

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	262	0.32	0.4	142	196	400	590	936	1544	952	1554
35	0.524	0.868	5.0	3.30	291	0.35	0.4	133	187	390	580	579	1121	695	1131
50	0.387	0.641	7.15	4.72	321	0.39	0.5	121	179	380	570	511	834	527	844
70	0.268	0.443	10.01	6.61	371	0.45	0.6	115	173	370	550	364	583	386	597
95	0.193	0.32	13.58	8.97	417	0.50	0.6	110	168	350	540	272	427	300	446
120	0.153	0.253	17.16	11.33	459	0.55	0.7	107	165	340	520	225	345	257	367
150	0.124	0.206	21.45	14.16	494	0.59	0.7	103	161	330	510	193	287	229	313
185	0.0991	0.164	26.45	17.46	543	0.65	0.8	100	158	320	500	165	237	206	267
240	0.0754	0.125	34.32	22.66	583	0.70	0.9	97	155	310	490	140	191	185	226
300	0.0601	0.100	42.9	28.32	602	0.72	1.0	95	153	300	490	126	163	174	203
400	0.0470	0.0778	57.2	37.76	627	0.75	1.1	92	150	290	480	113	141	164	184
500	0.0366	0.0605	71.5	47.2	654	0.79	1.2	90	147	290	470	105	124	158	171
630	0.0283	0.0469	90.09	59.47	726	0.87	1.3	87	145	280	460	97	110	151	160



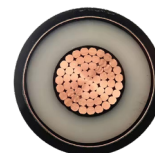
1 Core Cables - 3.6/6 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	3.4	1.2	1.6	1.8	25
35	3.4	1.2	1.6	1.8	26
50	3.4	1.2	1.6	1.8	28
70	3.4	1.2	1.6	1.8	29
95	3.4	1.2	1.6	1.9	31
120	3.4	1.2	1.6	1.9	34
150	3.4	1.2	1.6	2.0	35
185	3.4	1.2	2.0	2.0	37
240	3.4	1.2	2.0	2.1	40
300	3.4	1.2	2.0	2.2	42
400	3.4	1.2	2.0	2.3	47
500	3.4	1.3	2.5	2.5	51
630	3.4	1.4	2.5	2.6	54

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	208	0.42	0.5	144	210	460	660	936	1544	952	1554
35	0.524	0.868	5.0	3.30	229	0.46	0.6	136	200	440	640	679	1121	695	1131
50	0.387	0.641	7.15	4.72	252	0.5	0.6	131	195	420	620	511	834	527	844
70	0.268	0.443	10.01	6.61	288	0.58	0.7	122	188	390	600	364	583	386	597
95	0.193	0.32	13.58	8.97	323	0.65	0.7	122	182	390	580	272	427	300	446
120	0.153	0.253	17.16	11.33	353	0.71	0.8	116	172	370	550	225	345	257	367
150	0.124	0.206	21.45	14.16	380	0.76	0.8	110	166	350	530	193	287	229	313
185	0.0991	0.164	26.45	17.46	416	0.83	0.9	107	166	340	530	165	237	206	267
240	0.0754	0.125	34.32	22.66	460	0.92	0.9	104	163	330	520	140	191	185	226
300	0.0601	0.100	42.9	28.32	506	1.01	1	100	157	320	500	126	163	174	203
400	0.0470	0.0778	57.2	37.76	561	1.12	1.1	94	154	300	490	113	141	164	184
500	0.0366	0.0605	71.5	47.2	619	1.24	1.2	91	151	290	480	105	124	158	171
630	0.0283	0.0469	90.09	59.47	698	1.37	1.3	91	146	290	470	97	110	151	160



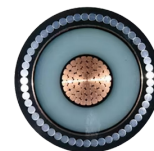
1 Core Cables - 3.6/6 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	3.4	1.5	19
35	3.4	1.5	20
50	3.4	1.6	21
70	3.4	1.6	23
95	3.4	1.7	25
120	3.4	1.8	27
150	3.4	1.8	29
185	3.4	1.9	31
240	3.4	2.0	33
300	3.4	2.0	35
400	3.4	2.1	38
500	3.4	2.2	42
630	3.4	2.3	46

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	208	0.42	0.5	144	210	460	660	936	1544	952	1554
35	0.524	0.868	5.0	3.30	229	0.46	0.6	136	200	440	640	679	1121	695	1131
50	0.387	0.641	7.15	4.72	252	0.5	0.6	131	195	420	620	511	834	527	844
70	0.268	0.443	10.01	6.61	288	0.58	0.7	122	188	390	600	364	583	386	597
95	0.193	0.32	13.58	8.97	323	0.65	0.7	122	182	390	580	272	427	300	446
120	0.153	0.253	17.16	11.33	353	0.71	0.8	116	172	370	550	225	345	257	367
150	0.124	0.206	21.45	14.16	380	0.76	0.8	110	166	350	530	193	287	229	313
185	0.0991	0.164	26.45	17.46	416	0.83	0.9	107	166	340	530	165	237	206	267
240	0.0754	0.125	34.32	22.66	460	0.92	0.9	104	163	330	520	140	191	185	226
300	0.0601	0.100	42.9	28.32	506	1.01	1	100	157	320	500	126	163	174	203
400	0.0470	0.0778	57.2	37.76	561	1.12	1.1	94	154	300	490	113	141	164	184
500	0.0366	0.0605	71.5	47.2	619	1.24	1.2	91	151	290	480	105	124	158	171
630	0.0283	0.0469	90.09	59.47	698	1.37	1.3	91	146	290	470	97	110	151	160



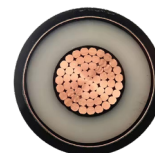
1 Core Cables - 8.7/15 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	4.5	1.2	1.6	1.8	28
35	4.5	1.2	1.6	1.9	29
50	4.5	1.2	1.6	1.9	30
70	4.5	1.2	1.6	2.0	32
95	4.5	1.2	2.0	2.0	35
120	4.5	1.2	2.0	2.1	36
150	4.5	1.2	2.0	2.2	38
185	4.5	1.2	2.0	2.2	39
240	4.5	1.2	2.0	2.3	42
300	4.5	1.2	2.0	2.3	45
400	4.5	1.3	2.5	2.5	49
500	4.5	1.3	2.5	2.6	52
630	4.5	1.4	2.5	2.7	57

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	171	0.47	0.6	150	210	480	680	936	1544	952	1554
35	0.524	0.868	5.0	3.30	187	0.51	0.6	141	207	460	660	679	1121	695	1131
50	0.387	0.641	7.15	4.72	204	0.57	0.7	138	195	440	640	511	834	527	844
70	0.268	0.443	10.01	6.61	232	0.63	0.7	132	188	420	600	364	583	386	597
95	0.193	0.32	13.58	8.97	258	0.71	0.8	126	182	400	580	272	427	300	446
120	0.153	0.253	17.16	11.33	281	0.74	0.8	119	179	380	570	225	345	257	367
150	0.124	0.206	21.45	14.16	301	0.79	0.9	113	176	360	560	193	287	229	313
185	0.0991	0.164	26.45	17.46	329	0.87	0.9	110	170	350	540	165	237	206	267
240	0.0754	0.125	34.32	22.66	363	0.96	1	107	166	340	530	140	191	185	226
300	0.0601	0.100	42.9	28.32	398	1.03	1.1	104	160	330	510	126	163	174	203
400	0.0470	0.0778	57.2	37.76	439	1.17	1.2	97	157	310	500	113	141	164	184
500	0.0366	0.0605	71.5	47.2	483	1.28	1.3	94	154	300	490	105	124	158	171
630	0.0283	0.0469	90.09	59.47	534	1.42	1.4	91	151	290	480	97	110	151	160



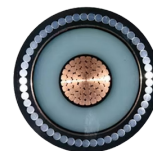
1 Core Cables - 8.7/15 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	4.5	1.6	21
35	4.5	1.7	22
50	4.5	1.7	24
70	4.5	1.7	25
95	4.5	1.8	28
120	4.5	1.9	30
150	4.5	1.9	31
185	4.5	2.0	33
240	4.5	2.0	35
300	4.5	2.1	38
400	4.5	2.2	41
500	4.5	2.3	44
630	4.5	2.4	49

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
25	0.727	1.20	3.6	2.36	171	0.47	0.6	150	210	480	680	936	1544	952	1554
35	0.524	0.868	5.0	3.30	187	0.51	0.6	141	207	460	660	679	1121	695	1131
50	0.387	0.641	7.15	4.72	204	0.57	0.7	138	195	440	640	511	834	527	844
70	0.268	0.443	10.01	6.61	232	0.63	0.7	132	188	420	600	364	583	386	597
95	0.193	0.32	13.58	8.97	258	0.71	0.8	126	182	400	580	272	427	300	446
120	0.153	0.253	17.16	11.33	281	0.74	0.8	119	179	380	570	225	345	257	367
150	0.124	0.206	21.45	14.16	301	0.79	0.9	113	176	360	560	193	287	229	313
185	0.0991	0.164	26.45	17.46	329	0.87	0.9	110	170	350	540	165	237	206	267
240	0.0754	0.125	34.32	22.66	363	0.96	1	107	166	340	530	140	191	185	226
300	0.0601	0.100	42.9	28.32	398	1.03	1.1	104	160	330	510	126	163	174	203
400	0.0470	0.0778	57.2	37.76	439	1.17	1.2	97	157	310	500	113	141	164	184
500	0.0366	0.0605	71.5	47.2	483	1.28	1.3	94	154	300	490	105	124	158	171
630	0.0283	0.0469	90.09	59.47	534	1.42	1.4	91	151	290	480	97	110	151	160



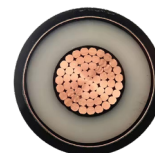
1 Core Cables - 12/20 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
35	5.5	1.2	1.6	1.9	30
50	5.5	1.2	1.6	2.0	33
70	5.5	1.2	2.0	2.1	35
95	5.5	1.2	2.0	2.1	37
120	5.5	1.2	2.0	2.2	38
150	5.5	1.2	2.0	2.2	40
185	5.5	1.2	2.0	2.3	42
240	5.5	1.2	2.0	2.3	45
300	5.5	1.2	2.5	2.4	48
400	5.5	1.3	2.5	2.6	52
500	5.5	1.4	2.5	2.7	55
630	5.5	1.5	2.5	2.8	58

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
								Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
	CU	AL	CU	AL								CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
35	0.524	0.868	5.0	3.3	162	0.65	0.7	150	207	460	660	679	1121	695	1131
50	0.387	0.641	7.15	4.72	177	0.71	0.8	141	195	440	640	511	834	527	844
70	0.268	0.443	10.01	6.61	200	0.80	0.8	135	188	420	620	364	583	386	597
95	0.193	0.32	13.58	8.97	222	0.89	0.9	129	182	400	600	272	427	300	446
120	0.153	0.253	17.16	11.33	241	0.96	0.9	122	179	380	580	225	345	257	367
150	0.124	0.206	21.45	14.16	257	1.03	1.0	116	176	360	560	193	287	229	313
185	0.0991	0.164	26.45	17.46	280	1.12	1.0	116	170	350	550	165	237	206	267
240	0.0754	0.125	34.32	22.66	307	1.23	1.1	110	166	340	540	140	191	185	226
300	0.0601	0.100	42.9	28.32	336	1.34	1.2	107	160	330	530	126	163	174	203
400	0.0470	0.0778	57.2	37.76	370	1.48	1.3	100	157	310	510	113	141	164	184
500	0.0366	0.0605	71.5	47.2	406	1.62	1.4	97	154	300	490	105	124	158	171
630	0.0283	0.0469	90.09	59.47	449	1.80	1.5	94	151	290	480	97	110	151	160



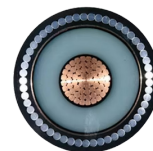
1 Core Cables - 12/20 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Armour Wire Size (mm)
35	5.5	1.7	25
50	5.5	1.8	27
70	5.5	1.8	28
95	5.5	1.9	30
120	5.5	1.9	32
150	5.5	2.0	33
185	5.5	2.0	35
240	5.5	2.1	38
300	5.5	2.2	40
400	5.5	2.3	43
500	5.5	2.4	49
630	5.5	2.5	51

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
35	0.524	0.868	5.0	3.3	162	0.65	0.7	150	207	460	660	679	1121	695	1131
50	0.387	0.641	7.15	4.72	177	0.71	0.8	141	195	440	640	511	834	527	844
70	0.268	0.443	10.01	6.61	200	0.80	0.8	135	188	420	620	364	583	386	597
95	0.193	0.32	13.58	8.97	222	0.89	0.9	129	182	400	600	272	427	300	446
120	0.153	0.253	17.16	11.33	241	0.96	0.9	122	179	380	580	225	345	257	367
150	0.124	0.206	21.45	14.16	257	1.03	1.0	116	176	360	560	193	287	229	313
185	0.0991	0.164	26.45	17.46	280	1.12	1.0	116	170	350	550	165	237	206	267
240	0.0754	0.125	34.32	22.66	307	1.23	1.1	110	166	340	540	140	191	185	226
300	0.0601	0.100	42.9	28.32	336	1.34	1.2	107	160	330	530	126	163	174	203
400	0.0470	0.0778	57.2	37.76	370	1.48	1.3	100	157	310	510	113	141	164	184
500	0.0366	0.0605	71.5	47.2	406	1.62	1.4	97	154	300	490	105	124	158	171
630	0.0283	0.0469	90.09	59.47	449	1.80	1.5	94	151	290	480	97	110	151	160



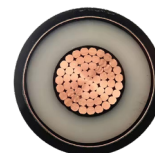
1 Core Cables - 18/30 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, AL. Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
50	8	1.2	2.0	2.2	38
70	8	1.2	2.0	2.2	41
95	8	1.2	2.0	2.3	42
120	8	1.2	2.0	2.3	45
150	8	1.3	2.5	2.4	47
185	8	1.3	2.5	2.5	48
240	8	1.3	2.5	2.6	52
300	8	1.4	2.5	2.6	54
400	8	1.4	2.5	2.7	58
500	8	1.5	2.5	2.9	61
630	8	1.6	2.5	2.9	64

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
50	0.387	0.641	7.15	4.72	138	0.83	1.0	151	214	480	680	511	834	527	844
70	0.268	0.443	10.01	6.61	154	0.92	1.0	144	201	460	640	364	583	386	597
95	0.193	0.32	13.58	8.97	169	1.01	1.1	138	195	440	620	272	427	300	446
120	0.153	0.253	17.16	11.33	183	1.1	1.1	132	188	420	600	225	345	257	367
150	0.124	0.206	21.45	14.16	194	1.16	1.2	126	182	400	580	193	287	229	313
185	0.0991	0.164	26.45	17.46	210	1.26	1.2	122	182	390	580	165	237	206	267
240	0.0754	0.125	34.32	22.66	229	1.37	1.3	119	176	380	560	140	191	185	226
300	0.0601	0.100	42.9	28.32	249	1.49	1.4	113	173	360	550	126	163	174	203
400	0.0470	0.0778	57.2	37.76	273	1.64	1.5	107	163	340	520	113	141	164	184
500	0.0366	0.0605	71.5	47.2	298	1.79	1.6	104	163	330	520	105	124	158	171
630	0.0283	0.0469	90.09	59.47	327	1.96	1.7	100	160	320	510	97	110	151	160



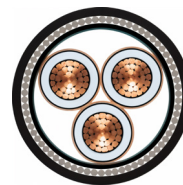
1 Core Cables - 18/30 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
50	8	1.9	32
70	8	2.0	34
95	8	2.1	36
120	8	2.1	37
150	8	2.1	38
185	8	2.2	40
240	8	2.3	43
300	8	2.3	45
400	8	2.5	49
500	8	2.5	52
630	8	2.7	56

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance		Inductance		Impedance			
	CU	AL	CU	AL				Trefoil	Flat Spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
50	0.387	0.641	7.15	4.72	138	0.83	1.0	151	214	480	680	511	834	527	844
70	0.268	0.443	10.01	6.61	154	0.92	1.0	144	201	460	640	364	583	386	597
95	0.193	0.32	13.58	8.97	169	1.01	1.1	138	195	440	620	272	427	300	446
120	0.153	0.253	17.16	11.33	183	1.1	1.1	132	188	420	600	225	345	257	367
150	0.124	0.206	21.45	14.16	194	1.16	1.2	126	182	400	580	193	287	229	313
185	0.0991	0.164	26.45	17.46	210	1.26	1.2	122	182	390	580	165	237	206	267
240	0.0754	0.125	34.32	22.66	229	1.37	1.3	119	176	380	560	140	191	185	226
300	0.0601	0.100	42.9	28.32	249	1.49	1.4	113	173	360	550	126	163	174	203
400	0.0470	0.0778	57.2	37.76	273	1.64	1.5	107	163	340	520	113	141	164	184
500	0.0366	0.0605	71.5	47.2	298	1.79	1.6	104	163	330	520	105	124	158	171
630	0.0283	0.0469	90.09	59.47	327	1.96	1.7	100	160	320	510	97	110	151	160



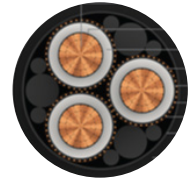
3 Core Cables - 3.6/6 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, Steel Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	2.5	1.2	2.0	2.3	43
35	2.5	1.3	2.0	2.3	45
50	2.5	1.3	2.5	2.5	49
70	2.5	1.4	2.5	2.6	52
95	2.5	1.5	2.5	2.7	56
120	2.5	1.5	2.5	2.8	60
150	2.5	1.6	2.5	2.9	62
185	2.5	1.6	2.5	3.1	66
240	2.6	1.7	2.5	3.3	74
300	2.8	1.8	3.15	3.5	81
400	3.0	2.0	3.15	3.8	90

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	272	0.33	0.4	116	370
35	0.524	0.868	5.0	3.3	301	0.36	0.5	108	350
50	0.387	0.641	7.15	4.72	332	0.4	0.5	102	330
70	0.268	0.443	10.01	6.61	383	0.46	0.6	97	310
95	0.193	0.32	13.58	8.97	432	0.52	0.6	92	290
120	0.153	0.253	17.16	11.33	474	0.57	0.7	89	280
150	0.124	0.206	21.45	14.16	511	0.61	0.7	87	280
185	0.0991	0.164	26.45	17.46	562	0.67	0.8	86	270
240	0.0754	0.125	34.32	22.66	602	0.72	0.9	83	260
300	0.0601	0.100	42.9	28.32	622	0.75	1.0	82	260
400	0.0470	0.0778	57.2	37.76	648	0.78	1.1	80	250



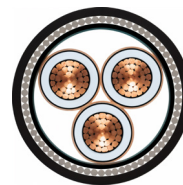
3 Core Cables - 3.6/6KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	2.5	2.0	34
35	2.5	2.1	37
50	2.5	2.2	41
70	2.5	2.3	44
95	2.5	2.5	48
120	2.5	2.6	51
150	2.5	2.7	54
185	2.5	2.8	58
240	2.6	3.0	64
300	2.8	3.1	70
400	3.0	3.4	78

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	272	0.33	0.4	116	370
35	0.524	0.868	5.0	3.3	301	0.36	0.5	108	350
50	0.387	0.641	7.15	4.72	332	0.4	0.5	102	330
70	0.268	0.443	10.01	6.61	383	0.46	0.6	97	310
95	0.193	0.32	13.58	8.97	432	0.52	0.6	92	290
120	0.153	0.253	17.16	11.33	474	0.57	0.7	89	280
150	0.124	0.206	21.45	14.16	511	0.61	0.7	87	280
185	0.0991	0.164	26.45	17.46	562	0.67	0.8	86	270
240	0.0754	0.125	34.32	22.66	602	0.72	0.9	83	260
300	0.0601	0.100	42.9	28.32	622	0.75	1.0	82	260
400	0.0470	0.0778	57.2	37.76	648	0.78	1.1	80	250



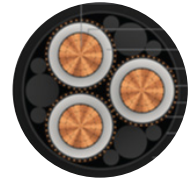
3 Core Cables - 6/10 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, Steel Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	3.4	1.3	2.5	2.4	48
35	3.4	1.3	2.5	2.5	51
50	3.4	1.4	2.5	2.6	53
70	3.4	1.4	2.5	2.7	56
95	3.4	1.5	2.5	2.9	61
120	3.4	1.6	2.5	3.0	64
150	3.4	1.6	2.5	3.1	67
185	3.4	1.7	2.5	3.2	72
240	3.4	1.8	3.15	3.4	79
300	3.4	1.9	3.15	3.6	84
400	3.4	2.0	3.15	3.8	92

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	216	0.43	0.4	116	390
35	0.524	0.868	5.0	3.3	327	0.47	0.5	108	370
50	0.387	0.641	7.15	4.72	266	0.52	0.5	102	350
70	0.268	0.443	10.01	6.61	298	0.6	0.6	97	330
95	0.193	0.32	13.58	8.97	334	0.67	0.6	92	320
120	0.153	0.253	17.16	11.33	365	0.73	0.7	89	310
150	0.124	0.206	21.45	14.16	392	0.78	0.7	87	300
185	0.0991	0.164	26.45	17.46	430	0.86	0.8	86	290
240	0.0754	0.125	34.32	22.66	476	0.95	0.9	83	280
300	0.0601	0.100	42.9	28.32	524	1.05	1.0	82	270
400	0.0470	0.0778	57.2	37.76	580	1.16	1.1	81	260



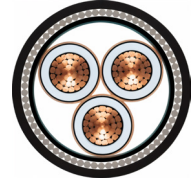
3 Core Cables - 6/10KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	3.4	2.2	39
35	3.4	2.2	41
50	3.4	2.4	45
70	3.4	2.5	48
95	3.4	2.6	52
120	3.4	2.7	55
150	3.4	2.8	59
185	3.4	2.9	62
240	3.4	3.1	68
300	3.4	3.2	73
400	3.4	3.5	80

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	216	0.43	0.4	116	390
35	0.524	0.868	5.0	3.3	327	0.47	0.5	108	370
50	0.387	0.641	7.15	4.72	266	0.52	0.5	102	350
70	0.268	0.443	10.01	6.61	298	0.6	0.6	97	330
95	0.193	0.32	13.58	8.97	334	0.67	0.6	92	320
120	0.153	0.253	17.16	11.33	365	0.73	0.7	89	310
150	0.124	0.206	21.45	14.16	392	0.78	0.7	87	300
185	0.0991	0.164	26.45	17.46	430	0.86	0.8	86	290
240	0.0754	0.125	34.32	22.66	476	0.95	0.9	83	280
300	0.0601	0.100	42.9	28.32	524	1.05	1.0	82	270
400	0.0470	0.0778	57.2	37.76	580	1.16	1.1	81	260



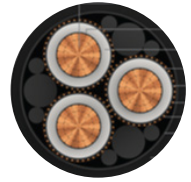
3 Core Cables - 8.7/15 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, Steel Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	4.5	1.4	2.5	2.6	53
35	4.5	1.4	2.5	2.7	56
50	4.5	1.5	2.5	2.8	58
70	4.5	1.5	2.5	2.9	62
95	4.5	1.6	2.5	3.0	66
120	4.5	1.7	2.5	3.2	69
150	4.5	1.7	2.5	3.3	73
185	4.5	1.8	3.15	3.4	78
240	4.5	1.9	3.15	3.6	84
300	4.5	2.0	3.15	3.8	89
400	4.5	2.1	3.15	4.0	98

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	178	0.48	0.6	132	410
35	0.524	0.868	5.0	3.3	193	0.53	0.6	123	390
50	0.387	0.641	7.15	4.72	211	0.58	0.7	116	370
70	0.268	0.443	10.01	6.61	240	0.65	0.7	110	350
95	0.193	0.32	13.58	8.97	267	0.73	0.8	105	330
120	0.153	0.253	17.16	11.33	291	0.79	0.8	102	320
150	0.124	0.206	21.45	14.16	312	0.85	0.9	98	310
185	0.0991	0.164	26.45	17.46	340	0.93	0.9	95	300
240	0.0754	0.125	34.32	22.66	375	1.02	1.0	91	290
300	0.0601	0.100	42.9	28.32	411	1.12	1.1	89	280
400	0.0470	0.0778	57.2	37.76	454	1.24	1.2	84	270



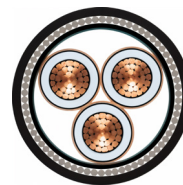
3 Core Cables - 8.7/15KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
25	4.5	2.3	44
35	4.5	2.4	46
50	4.5	2.5	50
70	4.5	2.6	53
95	4.5	2.7	57
120	4.5	2.8	60
150	4.5	2.9	64
185	4.5	3.1	68
240	4.5	3.2	73
300	4.5	3.4	78
400	4.5	3.6	85

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
25	0.727	1.2	3.6	2.36	178	0.48	0.6	132	410
35	0.524	0.868	5.0	3.3	193	0.53	0.6	123	390
50	0.387	0.641	7.15	4.72	211	0.58	0.7	116	370
70	0.268	0.443	10.01	6.61	240	0.65	0.7	110	350
95	0.193	0.32	13.58	8.97	267	0.73	0.8	105	330
120	0.153	0.253	17.16	11.33	291	0.79	0.8	102	320
150	0.124	0.206	21.45	14.16	312	0.85	0.9	98	310
185	0.0991	0.164	26.45	17.46	340	0.93	0.9	95	300
240	0.0754	0.125	34.32	22.66	375	1.02	1.0	91	290
300	0.0601	0.100	42.9	28.32	411	1.12	1.1	89	280
400	0.0470	0.0778	57.2	37.76	454	1.24	1.2	84	270



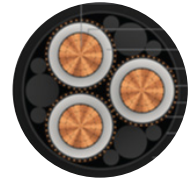
3 Core Cables - 12/20 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, Steel Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
35	5.5	1.5	2.5	2.8	61
50	5.5	1.6	2.5	3.0	63
70	5.5	1.6	2.5	3.1	67
95	5.5	1.7	2.5	3.2	71
120	5.5	1.7	3.15	3.4	75
150	5.5	1.8	3.15	3.5	80
185	5.5	1.9	3.15	3.6	83
240	5.5	2.0	3.15	3.8	89
300	5.5	2.1	3.15	3.9	94
400	5.5	2.2	3.15	4.2	102

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
35	0.524	0.868	5.0	3.3	168	0.67	0.7	129	410
50	0.387	0.641	7.15	4.72	183	0.73	0.8	122	390
70	0.268	0.443	10.01	6.61	207	0.83	0.8	115	370
95	0.193	0.32	13.58	8.97	229	0.92	0.9	110	350
120	0.153	0.253	17.16	11.33	249	1.00	0.9	105	340
150	0.124	0.206	21.45	14.16	268	1.08	1.0	103	330
185	0.0991	0.164	26.45	17.46	289	1.16	1.0	100	320
240	0.0754	0.125	34.32	22.66	318	1.027	1.1	95	300
300	0.0601	0.100	42.9	28.32	348	1.39	1.2	93	290
400	0.0470	0.0778	57.2	37.76	388	1.53	1.3	87	280



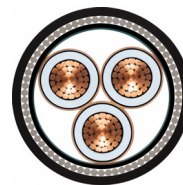
3 Core Cables - 12/20KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
35	5.5	2.6	51
50	5.5	2.7	55
70	5.5	2.8	58
95	5.5	2.9	62
120	5.5	3.0	65
150	5.5	3.1	68
185	5.5	3.2	72
240	5.5	3.4	77
300	5.5	3.5	83
400	5.5	3.8	89

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
35	0.524	0.868	5.0	3.3	168	0.67	0.7	129	410
50	0.387	0.641	7.15	4.72	183	0.73	0.8	122	390
70	0.268	0.443	10.01	6.61	207	0.83	0.8	115	370
95	0.193	0.32	13.58	8.97	229	0.92	0.9	110	350
120	0.153	0.253	17.16	11.33	249	1.00	0.9	105	340
150	0.124	0.206	21.45	14.16	268	1.08	1.0	103	330
185	0.0991	0.164	26.45	17.46	289	1.16	1.0	100	320
240	0.0754	0.125	34.32	22.66	318	1.027	1.1	95	300
300	0.0601	0.100	42.9	28.32	348	1.39	1.2	93	290
400	0.0470	0.0778	57.2	37.76	388	1.53	1.3	87	280



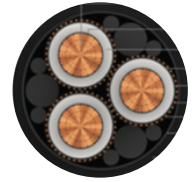
3 Core Cables - 18/30 KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, Steel Wire Armoured, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Inner Sheath Thickness (mm)	Armour Wire Size (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
50	8	1.8	3.15	3.4	76
70	8	1.8	3.15	3.5	80
95	8	1.9	3.15	3.6	84
120	8	2.0	3.15	3.7	87
150	8	2.0	3.15	3.9	91
185	8	2.1	3.15	4.0	95
240	8	2.2	3.15	4.1	100
300	8	2.3	3.15	4.3	106
400	8	2.4	3.15	4.5	113

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
50	0.387	0.641	7.15	4.72	142	0.85	1.0	134	430
70	0.268	0.443	10.01	6.61	159	0.95	1.0	127	400
95	0.193	0.32	13.58	8.97	175	1.05	1.1	121	390
120	0.153	0.253	17.16	11.33	189	1.13	1.1	117	370
150	0.124	0.206	21.45	14.16	201	1.21	1.2	113	360
185	0.0991	0.164	26.45	17.46	217	1.3	1.3	109	350
240	0.0754	0.125	34.32	22.66	237	1.42	1.4	104	330
300	0.0601	0.100	42.9	28.32	258	1.55	1.5	101	320
400	0.0470	0.0778	57.2	37.76	282	1.69	1.6	96	290



3 Core Cables - 18/30KV, CU Or AL Conductor, XLPE Insulation, Metallic Screen: Copper Tape, PVC Sheathed

Physical Parameters

Nominal Cross Section Area (SQ.MM)	Nominal Insulation Thickness (mm)	Nominal Overall Sheath Thickness (mm)	Approx Overall Dia (mm)
50	8	3.1	66
70	8	3.2	69
95	8	3.3	73
120	8	3.4	77
150	8	3.5	80
185	8	3.6	84
240	8	3.8	89
300	8	3.9	94
400	8	4.2	101

ELECTRICAL DATA

Nominal Cross Section Area	D.C Resistance		Short Circuit Rating of Conductor 1 sec.		Capacitance	Charging Current	Short Circuit Rating of Copper Tape Screen 1 Sec.	Reactance	Inductance
	CU	AL	CU	AL					
Sq.mm	Ω/Km	Ω/Km	kA	kA	pF/m	mA/m	kA	μΩ/m	μΩ/m
50	0.387	0.641	7.15	4.72	142	0.85	1.0	134	430
70	0.268	0.443	10.01	6.61	159	0.95	1.0	127	400
95	0.193	0.32	13.58	8.97	175	1.05	1.1	121	390
120	0.153	0.253	17.16	11.33	189	1.13	1.1	117	370
150	0.124	0.206	21.45	14.16	201	1.21	1.2	113	360
185	0.0991	0.164	26.45	17.46	217	1.3	1.3	109	350
240	0.0754	0.125	34.32	22.66	237	1.42	1.4	104	330
300	0.0601	0.100	42.9	28.32	258	1.55	1.5	101	320
400	0.0470	0.0778	57.2	37.76	282	1.69	1.6	96	290

Instrumentation Cables Conforming To En 50288-7



INSTRUMENTATION CABLES CONFORMING TO EN 50288-7



The steady growth of automation in process industry, especially process control across large user sites like oil refining and petrochemical plants, the steel industry, power stations etc. necessitates the reliable transmission of electrical signals, process data and control information.

Today, in a continuous process plants like Refineries, Fertilizers, Cement Ind, Steel Ind etc. Various parameters like temperature, pressure flow level etc are converted in to electrical signals which are fed to the control room. In control room these signals are analyzed and suitable commands are sent to the field to take corrective action. The control room has become the brain of the plant and instrumentation cables are the arteries.

Uniflex's instrumentation cables are preferred choice by the majority of indian industry, leading EPC contractors, and electrical consultants.

The shielded and screened type of instrumentation cables designed and manufactured by Uniflex, reduces the external noise pick up in the circuit, there by reduces the interference. These cables are also offered with GI armour wire for protected application.

Uniflex is a leading manufacturer of a instrumentation cable having wide product range conforming to BS EN 50288-7, BS 7629 and other different national and international specifications as well as customised specification which conforms to extreme fire properties under temperature rating from 60 deg to 105 deg.

Caution: Instrumentation cables are not designed for use with power supplies and should not be connected to then mains power.

Conductor: High conductivity annealed plain/tinned stranded copper conductor produced in-house from state-of-the art machine.

Insulation: In-house developed PVC/XLPE/XLPO/SiR/EPR insulation compound having high insulation properties.

Individual screen: Shielding type for twisted pair/triad, Aluminium-Mylar tape with tinned copper drain wire. Drain wire will continuous contact with aluminum side of the tape. Shielding with ATC braiding can also be provided to meet the specific requirements.

Pair/triad Identification: Identification of pair/triad by number printing or by numbered polyster tape over each pair/triad. Also idenfication is availabe with different color coding.

Collective screen: Aluminium-Mylar tape along with tinned copper drain wire to be applied over the pair/triad assembly. Drain wire will continuous contact with aluminum side of the tape. Shielding with ATC braiding can also be provided to meet specific requirements.

Inner Sheath: In-house developed thermoplastic compound having low emission of smoke and corrosive gases when exposed to fire and also ensures circular shape of cable.

Armour: Galvanised Steel Round/stripe wire Armoured to give mechanical protection.

Outer Sheath: In-house developed thermoplastic compound having low emission of smoke and corrosive gases when exposed to fire.

UNIFLEX INSTRU 300 MC (ST)



UNIFLEX INSTRU 500 MC (ST)



UNIFLEX INSTRU 300 (ST) PiMF



UNIFLEX INSTRU 300 P (ST)



UNIFLEX INSTRU 500 (ST) PiMF



UNIFLEX INSTRU 500 P (ST)



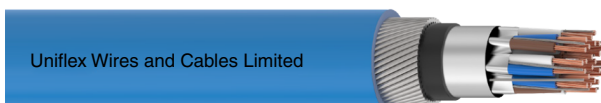
UNIFLEX INSTRU 300 (ST) TiMF



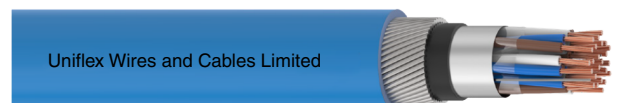
UNIFLEX INSTRU 300 T (ST)



UNIFLEX INSTRU 500 (ST) TiMF



UNIFLEX INSTRU 500 T (ST)





Single & MP Instrumentation cable PVC/PE Insulated Overall shielded 300V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 300 MC (ST), insulated with PVC/PE, Overall, al-mylar shielded, armoured / unarmoured and PVC / LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. INSTRU 300 MC (ST) cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

300 V

Operation Temperature

Max. PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinnedCu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White/Grey core with number printing.

Outer sheath colour:

Black/Blue

Bending Radius

Fixed installation > 12 x Overall Diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

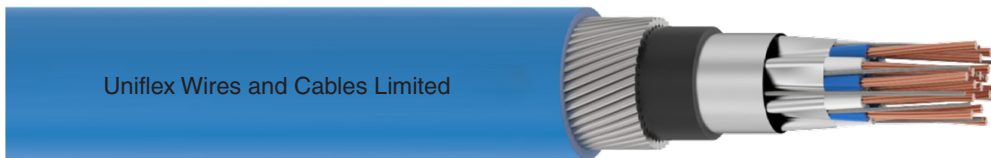
Conductor resistance -EN 60228
Insulation resistance -EN 50288-7
L/R Ratio -EN 50288-7
Mutual capacitance -EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V



Application

Uniflex IINSTRU 500 (ST) PiMF, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 500 (ST) PiMF cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

500 V

Operation Temperature

Max. PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C..

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance -EN 60228
Insulation resistance -EN 50288-7
L/R Ratio -EN 50288-7
Mutual capacitance -EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V

Uniflex Wires and Cables Limited

Application

Uniflex IINSTRU 500 (ST) PiMF, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 300 (ST) PiMF cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

300 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - EN 50288-7
Mutual capacitance -EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40

SINGLE & MP Instrumentation cable PVC/PE Insulated Overall shielded 300V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 300 P (ST), Stranded copper conductor, PVC/PE insulated, Overall, al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable conforming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 300 P (ST) cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etcz

Voltage Rating

300 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - EN 50288-7
Mutual capacitance -EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 500 (ST) PiMF, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 500 (ST) PiMF cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

500 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - EN 50288-7
Mutual capacitance - EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Overall shielded 500V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 500 P (ST), Stranded copper conductor, Uniflex INSTRU 500 P (ST), Stranded copper conductor, PVC/PE insulated, Overall, al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 500 P (ST) cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

500 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET(Aluminium /Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - 50288-7
Mutual capacitance - EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Individual & Overall shielded 300V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 300 (ST) TiMF, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 300 (ST) TiMF cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

300 V

Operation Temperature

PVC 70°C,

HRPVC 85°C,

XLPE 90°C,

LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen
Al/PET(Aluminium/Polyester tape) with drain wire of
tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to
EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as
per EN 50288-7
- Sheathed with Extruded PVC/LSZH to
EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7

EN 50288-1

EN 60228

EN 50290-2-22/27

Compliance

Conductor resistance - - EN 60228

Insulation resistance - EN 50288-7

L/R Ratio - 50288-7

Mutual capacitance - EN 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Overall shielded 300V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 300 T (ST), Stranded copper conductor, PVC/PE insulated, O shielded, armoured/unarmoured and PVC/LSZH sheathed cable conforming to BS E designed for transmission of analogue and digital signals in instrument and co Uniflex INSTRU 300 T (ST) cables are used for diverse applications within industri control, communication, data & voice transmission in oil, gas & petrochemical indus steel, fertilizers etc.

Voltage Rating

300 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET(Aluminium/Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White & Blue for Pair

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance
Insulation resistance
L/R Ratio
Mutual capacitance

Note B: As per the application/identification requirement, othercolour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Individual & Overall shielded 500V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 500 (ST) TiMF, Stranded copper conductor, PVC/PE insulated, Individual & overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable confirming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 500 (ST) TiMF cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

500 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Individual & Collective screen Al/PET(Aluminium/ Polyester tape) with drain wire of tinned Cu/ Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White, Blue & Brown for Triad

Outer sheath colour:

Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - 50288-7
Mutual capacitance - 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Instrumentation cable PVC/PE Insulated Overall shielded 500V

Uniflex Wires and Cables Limited

Application

Uniflex INSTRU 500 T (ST), Stranded copper conductor, PVC/PE insulated, Overall al-mylar shielded, armoured/unarmoured and PVC/LSZH sheathed cable conforming to BS EN 50288-7 are designed for transmission of analogue and digital signals in instrument and control systems. Uniflex INSTRU 500 T (ST) cables are used for diverse applications within industrial process for control, communication, data & voice transmission in oil, gas & petrochemical industries, cement, steel, fertilizers etc.

Voltage Rating

500 V

Operation Temperature

PVC 70°C,
HRPVC 85°C,
XLPE 90°C,
LDPE 60°C.

Construction

- Stranded Copper conductor as per EN 60228
- Insulated with PVC/PE as per EN 50288-7
- Collective screen Al/PET (Aluminium/Polyester tape) with drain wire of tinned Cu/Tinned copper braiding.
- Extruded inner sheath with PVC/LSZH to EN 50290-2-22/27
- Armoured with Galvanised Steel Strip/Round as per EN 50288-7
- Sheathed with Extruded PVC/LSZH to EN 50290-2-22/27

Core Identification

White, Blue & Brown for Triad

Outer sheath colour:

Black/Blue

Bending Radius

12 x Overall diameter

Standard and References

EN 50288-7
EN 50288-1
EN 60228
EN 50290-2-22/27

Compliance

Conductor resistance - EN 60228
Insulation resistance - EN 50288-7
L/R Ratio - 50288-7
Mutual capacitance - 50288-7

Note B: As per the application/identification requirement, other colour also available on request.

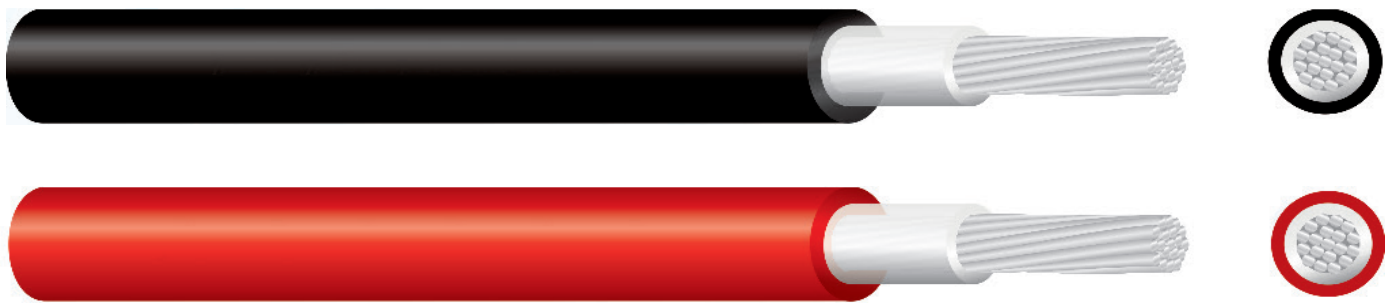
Electrical Parameter

Area of Conductor	Max. DC resistance of conductor at 20°C Plain wires	Max. DC resistance of conductor at 20°C Metal coated wires	Insulation resistance (PVC)	Insulation resistance (PE/XLPE)	Mutual capacitance	Inductance to resistance ratio(L/R)
Sqmm	Ohm/km	Ohm/km	MΩ/Km	MΩ/Km	nf/Km	μH/Ω
0.5	36	36.7	10	1000	< 250	< 25
0.75	24.5	24.8	10	1000	< 250	< 25
1	18.1	18.2	10	1000	< 250	< 25
1.5	12.1	12.2	10	1000	< 250	< 40
2.5	7.41	7.56	10	1000	< 250	< 60

Solar PV Cables



Solar PV Cables



Product Application: The Solar PVC Cables are suitable for the interconnection of Solar Photovoltaic panels and connections to the combiner boxes and AC/DC inverters and are suitable for both indoor and outdoor use. The complete range of Solar PV Cables is designed specifically for the connection of PV Panels and DC applications in compliance with the discrete Standards. The cables are suitable for installation in conduit or trunking systems and are not suitable for direct burial.

Product Standards: As per BS EN 50618, IEC 62930

Conductor Material: Tinned Copper

Conductor Type: Flexible Conductor (Class-5)

Conductor Shape: Round

CONDUCTOR INSULATION:

Insulation Material: Cross Linked Halogen Free & Flame-retardant compound

OUTER SHEATH:

Material: Cross Linked Halogen Free & Flame-retardant compound

Outer Sheath Identification: Red or Black

Range of Size & Core: 1.5Sqmm to 16Sqmm with Single Core

Range of Size: 1.5Sqmm to 16Sqmm

Ambient Temperature: -40°C to 90°C

Maximum Conductor Temperature: 40°C to 120°C

Voltage Rating: 1.5/ 1.5 kV DC

Voltage Test: 6500V as per EN 50395

Maximum Permissible Operating Voltage: DC 1.5kV (Conductor-Conductor, non-earthed system)

Nominal Voltage: AC-0.6/1.0 kV; DC-900/1.5 kV

Minimum Bending radius: 5 x Outer Diameter for fixed installation

Packaging Length: 100Mtr Coil or 500Mtr Drum or as per Customer's request

Overhead Conductors

Overhead Conductors

Aluminum Conductor Steel Reinforced (ACSR)



Product Application: Aluminium Conductors Steel-Reinforced (ACSR) is used in Medium, High and Extra-High voltage transmission lines. Apart from this, ACSR is also used for primary and secondary distribution lines.

Product Standard: As per BS 215-2, SANS 182-3

Conductor Construction: ACSR is composed of a concentric lay stranded conductor consisting of High Carbon Tensile Steel Galvanised core with one more layers of hard drawn stranded aluminium sires laid helically over the steel core. The Steel Core is responsible for providing the Mechanical Strength whereas the Aluminium Conductor is responsible for the conduction of current in the ACSR Conductors.

ACSR Code Name	Nominal Area of Cross Section (Sqmm)	Nos of Wires/Nominal Diameter of Wires (Nos./mm)		Approximate Overall Diameter of Conductor (mm)	Nominal Mass of ACSR Conductor (Kg/KM)	Maximum DC Resistance at 20°C (Ω/km)	Minimum Breaking Load (kN)
		Aluminium	Steel				
GOPHER	25	6/2.36	1/2.36	7.08	106	1.0930	9.61
WEASEL	30	6/2.59	1/2.59	7.77	128	0.9077	11.45
FERRET	40	6/3.00	1/3.00	9.00	172	0.6766	15.20
RABBIT	50	6/3.35	1/3.35	10.05	214	0.5426	18.35
HORSE	70	12/2.79	7/2.79	13.95	538	0.3936	61.20
DOG	100	6/4.72	7/1.57	14.15	394	0.2733	32.70
WOLF	150	30/2.59	7/2.59	18.13	726	0.1828	69.20
DINGO	150	18/3.35	1/3.35	16.75	506	0.1815	35.70
LYNX	175	30/2.79	7/2.79	19.53	842	0.1576	79.80
CARACAL	175	18/3.61	1/3.61	18.05	587	0.1563	41.10
PANTHER	200	30/3.00	7/3.00	21.00	974	0.1363	92.25
JAGUAR	200	18/3.86	1/3.86	19.30	671	0.1367	46.55
ZEBRA	400	54/3.18	7/3.18	28.62	1621	0.06740	131.90

ACSR Code Name	Nominal Area of Cross Section (Sqmm)	Nos of Wires/Nominal Diameter of Wires (Nos./mm)		Approximate Overall Diameter of Conductor (mm)	Nominal Mass of ACSR Conductor (Kg/KM)	Maximum DC Resistance at 20°C (Ω/km)	Minimum Breaking Load (kN)
		Aluminium	Steel				
SQUIRREL	20	6/2.11	1/2.11	6.39	85	1.3950	7.71
GOPHER	25	6/2.36	1/2.36	7.16	106	1.1160	9.61
FOX	35	6/2.79	1/2.79	8.45	148	0.7981	13.15
FERRET	40	6/3.00	1/3.00	9.09	172	0.6903	15.20
RABBIT	50	6/3.35	1/3.35	10.15	214	0.5534	18.40
MINK	60	6/3.66	1/3.66	11.09	255	0.4639	22.50
HARE	100	6/4.72	1/4.72	14.30	425	0.2788	36.54
DOG	100	6/4.72	7/1.57	14.29	394	0.2788	32.64
WOLF	150	30/2.59	7/2.59	18.31	726	0.1866	69.25
BEAR	250	30/3.35	7/3.35	23.69	1.214	0.1115	111.40
ZEBRA	400	54/3.18	7/3.18	28.91	1621	0.6878	131.90
DINOSAUR	660	54/3.95	19/2.37	35.94	2489	0.0445	205.50
ZEBRA	400	54/3.18	7/3.18	28.62	1621	0.0674	131.90

All Aluminium Conductor (AAC)



Product Application: Used as an Overhead Conductor for Power Distribution Lines.

Product Standard: As per BS 215-1, SANS 182-2

Conductor Construction: AAC is a concentric lay stranded conductor consisting of hard drawn aluminium wires in single layer and multi-layer construction

AAC Code Name	Nominal Area of Cross Section (Sqmm)	Nos of Wires/ Nominal Diameter of Wires (Nos./mm)	Approximate Overall Diameter of Conductor (mm)	Nominal Mass of AAC Conductor (Kg/KM)	Maximum DC Resistance at 20°C (Ω/km)	Minimum Breaking Load (kN)
MIDGE	22	7/2.06	6.18	64	1.2270	3.99
ANT	50	7/3.10	9.30	145	0.5419	8.28
FLY	60	7/3.40	10.20	174	0.4505	9.90
WASP	100	7/4.39	13.17	290	0.2702	16.0
HORNET	150	19/3.25	16.25	434	0.1825	25.70
CHAFER	200	19/3.78	18.90	587	0.1349	32.40
COCKROACH	250	19/4.22	21.10	731	0.1083	40.40
BUTTERFLY	300	19/4.65	23.25	888	0.0891	48.75
CENTIPEDE	400	37/3.78	26.46	1145	0.0694	63.10



Hard-Drawn Bare Copper Conductor (HDBC)



Product Application: Used in applications such as Overhead Transmission & Distribution networks, Transformer Earthing wherein the highest electrical conductivity per unit area and good strength to weight ratio are required.

Product Standard: As per BS 7884, SANS 182-1

Type of Conductor: Stranded (Class 2) Conductor as per SANS 1411-1

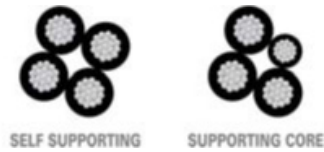
Conductor Construction: Conductor shall be concentric-lay and consisting of hard drawn copper wires in single layer and multi-layer construction.

Nominal Area of Cross Section (Sqmm)	Nos. of Wires / Wire Size (Nos./mm)	Approximate Overall Diameter (mm)	Nominal Mass (Kg/KM)	Maximum DC Resistance of Conductor at 20°C (Ω/KM)	Minimum Breaking Load (kN)
10	7/1.35	4.05	89.82	1.8290	3.752
14	7/1.60	4.80	126.20	1.3030	5.267
16	3/2.65	5.70	148.30	1.1060	6.194
16	7/1.70	5.10	142.40	1.1540	5.946
25	7/2.10	6.30	217.30	0.75630	9.073
32	3/3.75	8.06	296.90	0.5520	12.400
32	7/2.46	7.38	298.20	12.442	12.442
35	7/2.50	7.50	308.00	0.53370	12.860
50	7/3.00	9.00	443.50	0.37060	18.520
50	19/1.80	9.00	435.80	0.38190	17.70
70	7/3.55	10.65	621.10	0.26460	25.93
70	19/2.10	10.50	593.20	0.28060	24.09
95	19/2.50	12.50	840.70	0.1980	34.14
100	7/4.30	12.90	911.20	0.1810	36.54
120	19/2.80	14.0	1055.00	0.15780	42.83
125	19/2.90	14.50	1131.00	0.14710	45.940
150	19/3.20	16.00	1377.00	0.12080	55.940
150	37/2.25	15.75	1334.00	0.12640	53.880
185	19/3.55	17.75	1695.00	0.09815	68.860
185	37/2.50	17.50	1647.00	0.10240	66.490

Aerial Bundle Conductor (ABC)



Aerial Bundle Conductor (ABC) 600/1000V Cable System



Cable Description

Self-supporting system consists of four cores of hard-drawn stranded and compacted aluminum conductors of equal cross-section and insulated with carbon-loaded XLPE to ensure UV protection. All cores strained equally. Supporting-core system consists of three phase cores of hard-drawn stranded compacted aluminium conductors insulated with carbon-loaded XLPE laid up around an aluminium-alloy supporting core insulated with carbon loaded XLPE to ensure UV protection. Additional sub-conductors optional in both self-supporting and supporting-core systems.

Application Information

- Economical
- Flexible
- Aesthetically pleasing
- Safe
- Vandal proof
- Durable
- Adaptable

Properties

Specification : SANS 1418 Part 1 and 2

Temperature Range : -10°C to 80°C

Voltage Rating : 600/ 1000 V

Core Identification : Phase 1,2 and 3 indented, • Non strain-bearing neutral, 2 longitudinal ribs on opposite surfaces 0,5mm x 1,00mm • Strain-bearing (supporting) neutral, 1 longitudinal rib on one surface 0,5mm x 1,00mm

Packaging : Available on 500 metre wooden drums

Technical Data Self - Supporting System

Cable Size	Current Rating (Note 1)	Short Circuit Rating (Note 2)	Conductor Resistance @ 20°C	Conductor Resistance (ac)@ 80°	Induction Reactance @ 50Hz	Impedance (Z) @ 50Hz @ 80°C
mm ²	(A)	kA	(/km)	(/km)	(/km)	(/km)
25	105	2,3	1,200	1,490	0,096	1,493
35	144	3,2	0,868	1,078	0,096	1,082
50	183	4,6	0,641	0,796	0,090	0,801
70	228	6,4	0,443	0,550	0,089	0,557
95	277	8,5	0,320	0,397	0,086	0,406
120	322	11,0	0,253	0,314	0,084	0,325
150	350	13,8	0,206	0,256	0,082	0,269

Electrical Properties - Supporting Core System

Cable Size	Current Rating (Note 1)	Short Circuit Rating (Note 2)	Conductor Resistance @ 20°C	Conductor Resistance (ac)@ 80°	Supporting Core Size	Induction Reactance @ 50Hz	Impedance (Z) @ 50Hz @ 80°C
mm ²	(A)	kA	(/km)	(/km)	mm ²	(/km)	(/km)
25	105	2,3	1,200	1,490	54,6	0,101	1,493
35	144	3,2	0,868	1,078	54,6	0,097	1,082
50	183	4,6	0,641	0,796	54,6	0,089	0,801
70	228	6,4	0,443	0,550	54,6	0,086	0,557
95	277	8,5	0,320	0,397	54,6	0,081	0,405
120	322	11,0	0,253	0,314	70	0,079	0,324
150	350	13,8	0,206	0,256	95	0,079	0,268



Aerial Bundle Conductor (ABC) 600/1000V Low Voltage Cable System



SELF SUPPORTING



SUPPORTING CORE

NOTES :

1. Continuous current ratings are given for ambient temperature of 35 °C, and maximum conductor temperature of 80°C.
For other ambient temperatures use adjoining rating factors
2. Short circuit ratings of 1 second duration, for a final conductor temperature of 130 °C.

Temp °C	25	30	35	40	45
Factor	1.11	1.05	1.00	0.94	0.88

Technical Data - Mechanical Properties - Self Supporting System

Cable Size	Conductor Diameter		Core Diamter		Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load
Phase Cores	min	max	min	max	(mm)	(kg/km)	(kN)
mm²	(mm)		(mm)				
25	5,6	6,5	8,4	9,6	25	400	5
35	6,6	7,5	9,8	11,1	27	540	7
50	7,7	8,6	10,9	12,3	29	697	9
70	9,3	10,2	12,9	14,3	33	982	14
95	11,0	12,0	14,6	16,2	37	1302	19
120	12,5	13,5	16,1	17,5	41	1470	24
150	13,9	15,0	17,5	19,2	45	2011	30
Above Plus 25 mm² Auxiliaty Core							
25	N/A	N/A	N/A	N/A	25	505	N/A
35					32	645	
50					34	802	
70					38	1087	
95					42	1407	
120					44	1575	
150					48	2116	

Mechanical Properties - Supporting Core System

Cable Size	Conductor Diameter		Core Diameter		Supporting Core Size	Approx. Assembly Diameter	Approx. Assembly Mass	Maximum Design Load
Phase Cores	min	max	min	max		(mm)	(kg/km)	(kN)
mm²	(mm)		(mm)					
25	5,6	6,5	8,4	9,6	54,6	26	507	6
35	6,6	7,5	9,8	11,1	54,6	28	612	6
50	7,7	8,6	10,9	12,3	54,6	32	730	6
70	9,3	10,2	12,9	14,3	54,6	34	944	6
95	11,0	12,0	14,6	16,2	54,6	38	1183	6
120	12,5	13,5	16,1	17,5	70,0	40	1600	8
150	13,9	15,0	17,5	19,2	95,0	44	1870	13
Above Plus 25 mm² Auxiliaty Core								
25	N/A	N/A	N/A	N/A	N/A	32	612	N/A
35						34	717	
50						36	835	
70						38	1049	
95						42	1288	
120						50	1705	
150						56	1975	



Enamelled Round Copper Wires

Enamelled Wires

Uniflex Wires and Cables Limited ("UNIFLEX") an ISO 9001:2018, ISO 14001:2015 and ISO 45001:2018 **certified company**, was established in 2022 as a privately-owned greenfield manufacturing project in Lusaka with a vision to **manufacture** and **distribute** the best-in-class **Energy Efficient Wires & Cables** along with other Copper Products in Zambia & its neighbouring countries and thereby contribute critically in expanding the national Industrial capacity.

Since its inception, **UNIFLEX** has continuously expanded its Production Capacity and Product Range and thereby has emerged as one of the **most Reliable & Preferred** brands of Copper Products in Zambia.

As a part of its continuous endeavour & vision to expand its Product Portfolio, **UNIFLEX** has commissioned its state-of-the-art manufacturing facility for **ENAMELLED** Round Copper Winding Wires in Lusaka and thereby has become the first company in Zambia to manufacture the **Copper Enamelled Wire** locally. The latest PC-based equipment for measurement of Dielectric Dissipation Factor (Tan d), and well-equipped quality testing laboratory, ensure consistent wire quality during production.

UNIFLEX now offers an extensive range of **Enamelled Wires** and Copper strip profiles which are suitable for application in Transformers, Motors, Alternators, Contactors, Relays and Auto electricals. Moreover, the Winding Wires are also suitable for use in high-speed coil winding machines. **UNIFLEX** Enamelled Wires are **manufactured** strictly as per discrete International Standards IEC and NEMA. The Copper Conductors are manufactured from **99.997%** of pure ETP grade copper and insulated with high thermal class engineered insulation material, which provides excellent dielectric **properties** and excellent resistance to cracking.



Enamelled Round Winding Wires

- Product Range

	1	2	3	4	5	6
Type of enamelled wire	High mechanical strength	Sell solderable & bondable	General purpose	Self solderable	High Thermal & Mechanical/ strength	High temperature
SPECIFICATION STANDARD*	IS : 13730-1/ IEC-60317-1/ NEMA MW-15C/ JIS C 3202	IS: 13730-2/ 1 EC-60317-2	IS : 13730-3/ IEC-60317-3/ NEMA MW-5C	IS : 13730-4/ IEC-60317-4/ NEMA MW-75C/ JIS C 3202	IS: 13730-7/ IEC-60317-7	IS: 13730-8/ IEC-60317-8/ NEMA MW-30C/ JIS C 3202
THERMAL CLASS	130(B)	130 (B)	155 (F)	130 (B)	200	180(B)
Chemical base of base coat	Modified Polyvinyl Acetal	Polyurethanel	Modified Polyester	Polyurethane	Polyimide	Polyesterimide
Chemical base of top coat	Not applicable	Polyvinyl butyral/ Polyamide	Not applicable	Not Applicable	Not Applicable	Not Applicable
Range of Wire (Diameter)	5.000-0.500 mm	2.000-0-050 mm	5.000-0.050 mm	2.000-0.050 mm	5.000-0.200 mm	5.000-0.050 mm
Insulation Range	Grade 1,2 & 3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,2 8.3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,28 3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,2 & 3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1 & 2 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,2 & 3 as per IEC (Single, Heavy & Triple as per NEMA)
Standard colour	Golden Yellow to Light Orange	As per requirement	Light Brown/ Medium Drown	As per requirement	Golden Yellow to Light Orange	Light Brown/ Medium Drown
UL Listed	File No.: None	File No. : None	File No. : None	File No. : None	File No.: None	File No. : None
TECHNICAL PROPERTIES AS PER IS:13730-0-1 / IEC-60317-0-1						
Heat shock (°C)	155	155	175	155	240	200
Cut through (°C)	170	170	240	170	400	300
Solderable temperature (°C)	Not applicable	375	Not applicable	375	Not applicable	Not applicable
Resistance to Abrasion for 1.00mm dia grade 2 wire (n)	>11.3	>9.3	>10.4	>9.3	>6.6	>10.9
Resistance to refrigerants	Very good	Not applicable	Not applicable	Not applicable	Very Good	Good
Flexibility & Adherence	Very good	Good	Good	Good	Very Good	Good
Bonding Temperature (°C)	Not applicable	170/200 depending on overcoat	Not applicable	Not applicable	Not applicable	Not applicable
SPECIAL CHARACTERISTICS & APPLICATION	High mechanical properties, good transformer oil resistance, suitable for 130°C Hermetic applications, used in oil filled transformers & equipments requiring high mechanical properties such as auto electricals.	Solderable, thermoplastic bonded by heat or solvent, used for all self supported coils for television, small motors, relays, magnets, telephones & voice coils of all kinds can be bonded in forms by heating at 170/180°C	Upgraded thermo mechanical properties compared to ordinary polyesters, used in ignition coils. oil filled transformers, relays, contactors, fhp motors. This version can also be made for upgraded abrasion.	Self solderable property with good insulation resistance, high flexibility used in all communication equipments, relays, magnetic spools, universal 8 non-impregnated winding of all kinds of transformers.	Designed for using of wire for product with maximum value of the thermal and mechanical characteristics	Good resistance against refrigerants, transformer oil. high burnout resistance, used in fhp motors, hermetic application and thermal class 180°C equipments.
Special Notes	Can be supplied with Polyamide (Nylon) topcoated for improved high-speed windability, if required.		Can be supplied with Polyamide (Nylon) topcoated for improved high-speed windability. if required.	Can be supplied with Polyamide (Nylon) topcoated for improved high-speed windability, if required.		Can be supplied with Polyamide (Nylon) topcoated for improved high-speed windability, if required.



7	8	9	10	11	12	13	14	15
High temperature	Self solderable	Self	General purpose	Self solderable	High Thermal & Mechanical/ strength	High temperature	High Thermal & Mechanical/ strength	High Thermal & Mechanical/ strength
IS : 13730-13/ IEC- 60317-13/ NEMA MW-35C/ 73C(Hermetic)	IS: 13730-19/ IEC-60317-19 NEMA MW-28C	IS : 13730-20/ IEC-60317-20/ NEMA MW-79C	IS : 13730-21/ IEC-60317-21 NEMA MW-80C	IS : 13730-22/ IEC-60317-22/ NEMA MW-76C	IS : 13730-23/ IEC-60317-23	NEMA MW-24C	IS : 13730-26/ IEC-60317-26/ NEMA MW-81C	IS : 13730-34/ IEC-60317-34/ JIS C 3202-PEW
NEMA MW-35C/ 73C(Hermetic)	IS: 13730-19/ IEC-60317-19 NEMA MW-28C	IS : 13730-20/ IEC-60317-20/ NEMA MW-79C	IS : 13730-21/ IEC-60317-21 NEMA MW-80C	IS : 13730-22/ IEC-60317-22/ NEMA MW-76C	IS : 13730-23/ IEC-60317-23	NEMA MW-24C	IS : 13730-26/ IEC-60317-26/	200
200 (C)	130 (B)	155(F)	155 (F)	180(H)	180(H)	155(F)	200 (C)	130(B)
Theicpolyester / Polyesterimide	Polyurethane	Polyurethane	Polyurethane	Polyester/ Polyesterimide	Polyesterimide	Polyester	Polyamideimide	Polyester
Polyamideimide	Nylon	Not applicable	Nylon	Nylon	Not applicable	Polyamide	Not applicable	Not applicable
5.000-0.050 mm	2.000-0.050 mm	0.800-0.050 mm	1.600-0.050 mm	5.000-0.050 mm	1.600-0.050 mm	1.600-0.254 mm	1.600-0.071 mm	5.000-0.050 mm
Grade 1,28 3 as per IEC (Single, Heavy & Triple	Golden Yellow to Light Orange	As per requirement	Light Brown/ Medium Drown	As per requirement	Golden Yellow to Light Orange	Light Brown/ Medium Drown	Golden Yellow to Light Orange	Golden Yellow to Light Orange
Light Brown Medium Bruwu	As per requirements	As per requirements	As per requirements	Medium Brown to Dark Bruwn	Light Brown	As per requirement	Light Brown	Medium Brown
File No.: EI 74288 Thermal Class 200 and 220	File No.: None	File No.: EI 74288 Thermal Class 155	File No.: None	File No.: EI 74288 Thermal Class 180	File No.: None	File No.: EI 74288 Thermal Class 155	File No.: None	File No.: None
200	155	175	175	200	200	175	220	155
320	170	200	200	265	265	240	350	240
Not applicable	375	390	390	Not applicable	470	Not applicable	Not applicable	Not applicable
>11.3	>9.3	>8.1 (0.8 mm)	>9.3	>10.9	>10.9	>10.0	>7.05 (forgr.1)	>10.4
Very good	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Very good	Not applicable
Very good	Good	Good	Good	Good	Good	Good	Good	Good
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Very good resistance for refrigerants & chemicals, high burnout resistance, excellent windability, low coefficient of friction, high slotfill factor, used in special motors including Hermetic motors, Armatures, Alternators, Power Tools and high HP motors, suitable for high speed coil winding.	Low coefficient of friction, besides properties of general purpose polyurethane. It is suitable for winding in small size motors, coils of electrical instruments, especially of high speed winding.	Self solderable property with its low dielectric dissipation factor under high frequency. It can be widely used in electrical instruments of machine tools, motors which have special requirements of this type of enamel.	Low coefficient of friction, besides properties of polyurethane, suitable for winding in small and medium electrical instruments, for high speed winding.	Used in all 180°C class equipment requiring high speed machine winding, low coefficient of friction.	Self solderable with high potential both under the dry and humid conditions, good properties in heat shock and cut through, it is suitable for the coils of various motor appliances, instruments and telephone equipments.	Good mechanical, electrical & chemical resistance properties. Improved for high speed winding. FHP motors, coils & relays, audio & instrument coils.	High burnout resistance, excellent windability. low coefficient of friction, high slot fill factor, used in special types of motors & electromotive tools.	Good thermal & electrical properties, used in general purpose rotating & static electrical equipments, oil transformers, control coils



	16	17	18	19	20	21
Type of enamelled wire	Self solderable/ Self bonding	Self solderable/ Self bonding	Self bonding	General purpose	General purpose	Self solderable High Temperature
SPECIFICATION STANDARD*	IS : 13730-35/ IEC-60317-35 JIS C 3202-SBUEW	IS : 13730-36/ IEC-60317-36 JIS C 3202-SBUEW	IS : 13730-37/ IEC-60317-37	IS : 13730-45/ IEC-60317-45	IS : 13730-54/ IEC-60317-54	IS: 13730-51/ IEC-60317-51/ NEMA MW-82C
THERMAL CLASS	155 (F)	180(H)	180 (H)	130 (B)	155 (F)	180 (H)
Chemical base of base coat	Polyurethane	Polyesterimide	Polyesterimide	Polyester	Polyester	Polyurethane
Chemical base of top coat	Polyvinyl Polyvinyl butyral/Polyamide butyral/ Polyamide		Polyvinyl butyral/Polyamide Not applicable		Not Applicable	Not Applicable
Range of Wire (Diameter)	0.800-0.050 mm	1.600-0.050 mm	1.600-0.050 mm	5.000-0.050 mm	5.000-0.050 mm	1.000-0.050 mm
Insulation Range	Grade 1b, 2b & 3b as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1b, 2b & 3b as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1b, 2b & 3b as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,2 & 3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1.2& 3 as per IEC (Single, Heavy & Triple as per NEMA)	Grade 1,2 & 3 as per IEC (Single, Heavy & Triple as per NEMA)
Standard colour	As per requirements	Light Brown / Medium Brown	Light Brown/ Medium Brown	Light Brown/ Medium Brown	Light Brown/ Medium Brown	As per requirements
UL Listed	File No.: None	File No.: None	File No.: None	File No.: None	File No.: None	File No.: None
TECHNICAL PROPERTIES AS PER IS:13730-0-1 / IEC-60317-0-1						
Heat shock (°C)	175	200	200	155	175	200
Cut through (°C)	200	265	300	240	240	240
Solderable temperature (°C)	390	470	Not applicable	Not applicable	Not applicable	Not applicable
Resistance to Abrasion for 1.00mm dia grade 2 wire (n)	>8.1	>10.9	>10.9	>10.4	>10.4	>7.8
Resistance to refrigerants	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
Flexibility & Adherence	Good	Good	Good	Good	Good	Good
Bonding Temperature (°C)	170/200 depending on overcoat				Not applicable	Not applicable
SPECIAL CHARACTERISTICS & APPLICATION	Solderable, thermoplastic bonded by heat or solvent, used for all self supported coils for television, electronics, small motors, relays, magnets, telephones & volve coils of all kinds can be bonded in forms by heating at 170/180°C	Solderable, thermoplastic bonded by heat or solvent, used for all self supported coils for television, electronics, small motors, relays, magnets, telephones & volve coils of all kinds can be bonded in forms by heating at 170/180°C	Class 180°C with self bonding property and all other properties of Polyesterimide.	General purpose 130°C polyester Good thermal 8 electrical properties, used in general purpose rotating & static electrical equipments, oil transformers, control coils.	General purpose 155°C polyester with heat shock at higher mandrel diameter. Good thermal & electrical properties, used in general purpose rotating & static electrical equipments, oil transformers, control coils.	Good mechanical, electrical & chemical resistant properties. Improved thermal resistance. Fast solderability. Fractional & integral horsepower motors Class 155. Coils & relays. Instrument 8 audio coils.



Diameters And Increase In Diameters Of Enamelled Round Winding Wires (Metric Sizes)

Basis: IEC 60317-0-1

Physical Parameters

Conductor Diameter	Conductor Tolerance	Grade 1		Grade 2		Grade 3	
		Minimum Increase	Maximum Overall Dia	Minimum Increase	Minimum Overall Dia	Minimum Increase	Maximum Overall Dia
(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
0.040	-	-	0.049	-	0.054	-	-
0.045	-	-	0.055	-	0.061	-	-
0.050	-	-	0.060	-	0.066	-	-
0.056	-	-	0.067	-	0.074	-	-
0.063	-	-	0.076	-	0.083	-	-
0.071	0.003	0.007	0.084	0.012	0.091	0.018	0.097
0.080	0.003	0.008	0.094	0.014	0.101	0.020	0.108
0.090	0.003	0.008	0.105	0.015	0.113	0.022	0.120
0.100	0.003	0.008	0.117	0.016	0.125	0.023	0.132
0.112	0.003	0.009	0.130	0.017	0.139	0.026	0.147
0.125	0.003	0.010	0.144	0.019	0.154	0.028	0.163
0.140	0.003	0.011	0.160	0.021	0.171	0.030	0.181
0.160	0.003	0.012	0.182	0.023	0.194	0.033	0.205
0.180	0.003	0.013	0.204	0.025	0.217	0.036	0.229
0.200	0.003	0.014	0.226	0.027	0.239	0.039	0.252
0.224	0.003	0.015	0.252	0.029	0.266	0.043	0.280
0.250	0.004	0.017	0.281	0.032	0.297	0.048	0.312
0.280	0.004	0.018	0.312	0.033	0.329	0.050	0.345
0.315	0.004	0.019	0.349	0.035	0.367	0.053	0.384
0.355	0.004	0.020	0.392	0.038	0.411	0.057	0.428
0.400	0.005	0.021	0.439	0.040	0.459	0.060	0.478
0.450	0.005	0.022	0.491	0.042	0.513	0.064	0.533
0.500	0.005	0.024	0.544	0.045	0.566	0.067	0.587
0.560	0.006	0.025	0.606	0.047	0.630	0.071	0.653
0.630	0.006	0.027	0.679	0.050	0.704	0.075	0.728
0.710	0.007	0.028	0.762	0.053	0.789	0.080	0.814
0.800	0.008	0.030	0.855	0.056	0.884	0.085	0.911
0.900	0.009	0.032	0.959	0.060	0.989	0.090	1.018
1.000	0.010	0.034	1.062	0.063	1.094	0.095	1.124
1.120	0.011	0.034	1.184	0.065	1.217	0.098	1.248
1.250	0.013	0.035	1.316	0.067	1.349	0.100	1.381
1.400	0.014	0.036	1.468	0.069	1.502	0.103	1.535
1.600	0.016	0.038	1.670	0.071	1.706	0.107	1.740
1.800	0.018	0.039	1.872	0.073	1.909	0.110	1.944
2.000	0.020	0.040	2.074	0.075	2.112	0.113	2.148
2.240	0.022	0.041	2.316	0.077	2.355	0.116	2.392
2.500	0.025	0.042	2.578	0.079	2.618	0.119	2.656
2.800	0.028	0.043	2.880	0.081	2.922	0.123	2.961
3.150	0.032	0.045	3.233	0.084	3.276	0.127	3.316
3.550	0.036	0.046	3.635	0.086	3.679	0.130	3.721
4.000	0.040	0.047	4.088	0.089	4.133	0.134	4.176
4.500	0.045	0.049	4.591	0.092	4.637	0.138	4.681
5.000	0.050	0.050	5.093	0.094	5.141	0.142	5.186



Diameters And Increase In Diameters Of Enamelled Round Winding Wires (Metric Intermediate Sizes)

Physical Parameters

Conductor Diameter (mm)	Conductor Tolerance (mm)	Grade 1		Grade 2		Grade 3	
		Minimum Increase (mm)	Maximum Overall Dia (mm)	Minimum Increase (mm)	Minimum Overall Dia (mm)	Minimum Increase (mm)	Maximum Overall Dia (mm)
0.043	-	-	0.052	-	0.058	-	-
0.048	-	-	0.059	-	0.065	-	-
0.053	-	-	0.064	-	0.070	-	-
0.063	-	-	0.072	-	0.079	-	-
0.067	0.003	0.007	0.080	0.012	0.088	0.018	
0.075	0.003	0.007	0.089	0.014	0.095	0.020	0.102
0.085	0.003	0.008	0.100	0.015	0.107	0.022	0.114
0.095	0.003	0.008	0.111	0.016	0.119	0.023	0.126
0.106	0.003	0.009	0.123	0.017	0.132	0.026	0.140
0.118	0.003	0.010	0.136	0.019	0.145	0.028	0.154
0.132	0.003	0.011	0.152	0.021	0.162	0.030	0.171
0.150	0.003	0.012	0.171	0.023	0.182	0.033	0.193
0.170	0.003	0.013	0.194	0.025	0.205	0.036	0.217
0.190	0.003	0.014	0.216	0.027	0.228	0.039	0.240
0.212	0.003	0.015	0.240	0.029	0.254	0.043	0.268
0.236	0.004	0.017	0.267	0.032	0.283	0.048	0.298
0.265	0.004	0.018	0.297	0.033	0.314	0.050	0.330
0.300	0.004	0.019	0.334	0.035	0.352	0.053	0.369
0.335	0.004	0.020	0.372	0.038	0.391	0.057	0.408
0.375	0.005	0.021	0.414	0.040	0.434	0.060	0.453
0.425	0.005	0.022	0.466	0.042	0.488	0.064	0.508
0.475	0.005	0.024	0.519	0.045	0.541	0.067	0.582
0.530	0.006	0.025	0.576	0.047	0.600	0.071	0.623
0.600	0.006	0.027	0.649	0.050	0.674	0.075	0.698
0.670	0.007	0.028	0.722	0.053	0.749	0.080	0.774
0.750	0.008	0.030	0.805	0.056	0.834	0.085	0.861
0.850	0.009	0.032	0.909	0.060	0.939	0.090	0.968
0.950	0.010	0.034	1.012	0.063	1.044	0.095	1.074
1.060	0.011	0.034	1.124	0.065	1.157	0.098	1.188
1.180	0.012	0.035	1.246	0.067	1.279	0.100	1.311
1.320	0.013	0.036	1.388	0.069	1.422	0.103	1.455
1.500	0.015	0.038	1.570	0.071	1.606	0.107	1.640
1.700	0.017	0.039	1.772	0.073	1.809	0.110	1.844
1.900	0.019	0.040	1.974	0.075	2.012	0.113	2.048
2.120	0.021	0.041	2.196	0.077	2.235	0.116	2.272
2.360	0.024	0.042	2.438	0.079	2.478	0.119	2.516
2.650	0.027	0.043	2.730	0.081	2.772	0.123	2.811
3.000	0.030	0.045	3.083	0.084	3.126	0.127	3.166
3.350	0.034	0.046	3.435	0.086	3.479	0.130	3.521
3.750	0.038	0.047	3.838	0.089	3.883	0.134	3.926
4.250	0.043	0.049	4.341	0.092	4.387	0.138	4.431
4.750	0.048	0.050	4.843	0.094	4.891	0.142	4.936



Diameters And Increase In Diameters Of Enamelled Round Winding Wires (Swg Sizes)

Physical Parameters

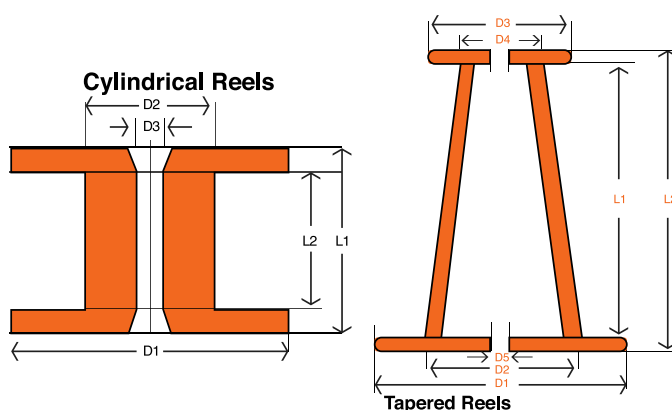
Nominal Conductor Diameter		Conductor Tolerance +/- (mm)	Grade 1		Grade 2		Grade 3	
			Minimum Increase (mm)	Maximum Overall Dia (mm)	Minimum Increase (mm)	Minimum Overall Dia (mm)	Minimum Increase (mm)	Maximum Overall Dia (mm)
(SWG)	(mm)							
11	2.946	0.030	0.045	3.029	0.084	3.072	0.127	3.112
12	2.642	0.027	0.043	2.722	0.081	2.764	0.123	2.803
13	2.337	0.024	0.042	2.415	0.079	2.455	0.119	2.493
14	2.032	0.020	0.041	2.108	0.077	2.147	0.116	2.184
15	1.829	0.019	0.040	1.903	0.075	1.941	0.113	1.977
16	1.626	0.017	0.039	1.698	0.073	1.735	0.110	1.770
17	1.422	0.015	0.038	1.492	0.071	1.528	0.107	1.562
18	1.219	0.013	0.035	1.285	0.067	1.318	0.100	1.350
19	1.016	0.011	0.034	1.080	0.065	1.113	0.098	1.144
20	0.914	0.010	0.034	0.976	0.063	1.008	.095	1.038
21	0.813	0.009	0.032	0.872	0.060	0.902	.090	0.931
22	0.711	0.008	0.030	0.766	0.056	0.795	.085	0.822
23	0.610	0.006	0.027	0.659	0.050	0.684	0.075	0.708
24	0.559	0.006	0.025	0.605	0.047	0.629	0.071	0.652
25	0.508	0.006	0.025	0.554	0.047	0.578	0.071	0.602
26	0.457	0.005	0.024	0.501	0.045	0.523	0.067	0.544
27	0.417	0.005	0.022	0.458	0.042	0.480	0.064	0.500
28	0.376	0.005	0.021	0.417	0.040	0.435	0.060	0.454
29	0.345	0.005	0.020	0.382	0.038	0.401	0.057	0.418
30	0.315	0.004	0.019	0.349	0.035	0.367	0.053	0.384
31	0.295	0.004	0.019	0.329	0.035	0.347	0.053	0.364
32	0.274	0.004	0.018	0.306	0.033	0.323	0.050	0.339
33	0.254	0.004	0.018	0.286	0.033	0.303	0.050	0.319
34	0.234	0.004	0.017	0.265	0.032	0.281	0.048	0.296
35	0.213	0.003	0.015	0.241	0.029	0.255	0.043	0.269
36	0.193	0.003	0.014	0.219	0.027	0.232	0.039	0.245
37	0.173	0.003	0.013	0.197	0.025	0.210	0.036	0.222
38	0.152	0.003	0.012	0.174	0.023	0.186	0.033	0.197
39	0.132	0.003	0.011	0.152	0.021	0.162	0.030	0.171
40	0.122	0.003	0.010	0.141	0.019	0.151	0.028	0.160
41	0.112	0.003	0.009	0.130	0.017	0.139	0.026	0.147
42	0.102	0.003	0.009	0.119	0.017	0.128	0.026	0.136
43	0.091	0.003	0.008	0.107	0.016	0.115	0.023	0.122
44	0.081	0.003	0.008	0.096	0.015	0.103	0.022	0.110
45	0.071	0.003	0.007	0.084	0.012	0.091	0.018	0.097



Packaging Details and Reel Dimensions

Cylindrical Type As Per BS1489

Parallel Barrel Reels	Wire Range in mm.	Dimension in mm.					Reel Capacity (Kg)	Weight
		D1	D2	D3	L1	L2		
IN 24	0.125-0.250	160	85	36	125	100	3	0.24
IN 34	0.280-0.800	200	100	38	155	125	8	0.45
IN 42	0.800-2.240	245	110	40	150	120	18	0.65



Tapered Type As Per DIN 4683 (IEC 60264 - 3)

Parallel Barrel Reels	Wire Range in mm.	Dimension in mm.							Reel Capacity (Kg)	Weight
		Flange Diameter	Barrel Diameter	Bore Diameter	Traverse Length	Flange Diameter	Flange Diameter	Overall Length		
		D1	D3	D2	D4	D5	L1	L2		
PT - 01	0.125 - 0.150	105	95	58	53	22	100	120	1	0.10
PT - 04	0.190 - 0.250	140	125	84	73	25	170	198	4	0.25
PT - 10	0.100 - 0.315	180	160	110	95	30	200	227	10	0.56
PT - 15	0.100 - 0.315	200	180	108	95	30	200	227	15	0.62
PT - 20	0.200 - 0.500	225	210	150	132	32	248	278	20	0.74
PT - 25	0.500 - 1.120	225	210	128	108	32	248	278	25	0.74
PT - 45	0.355 - 2.000	250	236	160	140	100	335	400	45	2.00
PT - 90	1.400 - 2.000	315	300	200	180	100	425	550	90	3.90



Bare Copper Wire / Copper Strip And Copper Profile

Specification	Size Range
Bare Copper wires for general engineering purposes	Conductor Size: 0.4 mm to 6.00 mm
Bare copper Strip for electrical purposes	Cross Sectional area: 4 to 75 Sq mm Width: 4 to 15 mm, Thick :1 to 5 mm

Application: Cable, Imitation, Plating, Switch gears, pump and motors, Electrical control panel, Other types of Electrical & Electronic Equipments

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal blue lines across its entire width. The lines are thin and consistent in color, set against a plain white background. There are no margins, text, or other markings present on the page.

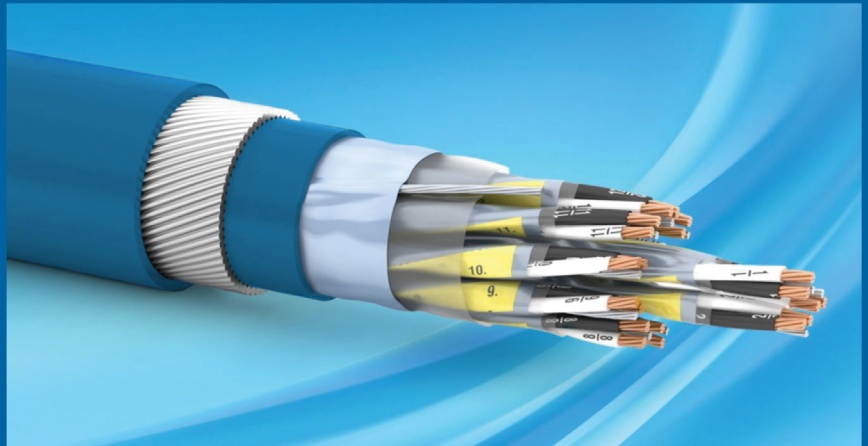
Products for Special Applications

Uniflex has a unique strength of designing and manufacturing cables for special applications which includes the following:

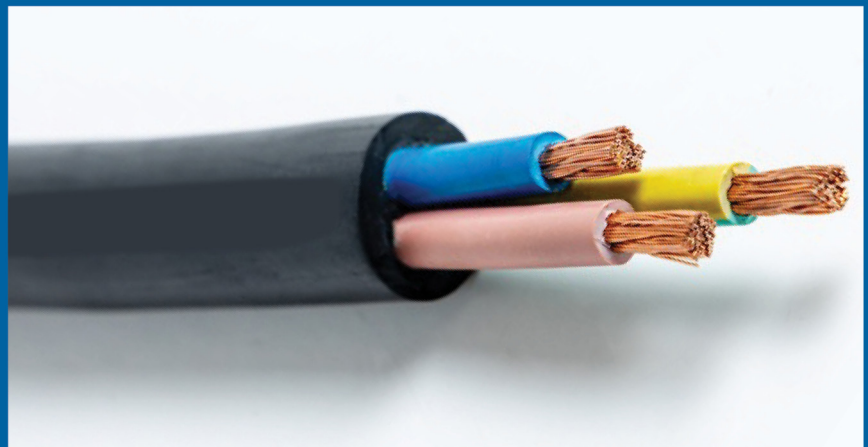
Enamelled Copper Wires



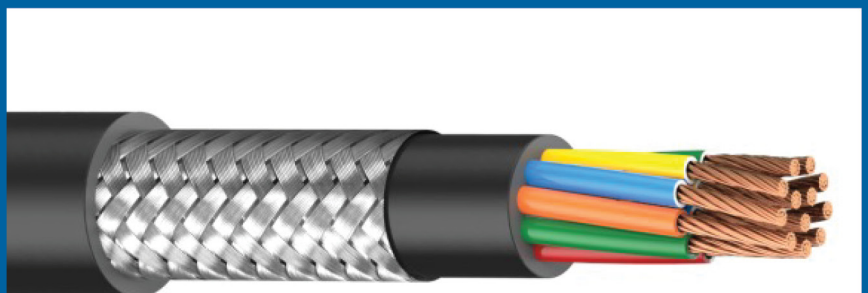
Instrumentation Cables



Nitrile Based Submersible Cables



Braiding Cables



Unique Features of UNIFLEX Wires & Cables

High flame retardancy



..... Enhanced Layer of Insulation for better safety

99.999% pure copper



..... High conductivity of copper

High thermal stability



..... Smooth surface and hence increased easiness to be pulled easily in pipes during installation

Bunched conductor



..... High discoloration resistance capacity of copper conductors

High ageing property of PVC insulation



..... Better flexibility for easy wiring

100Meters assured seal





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