

Victor Cables



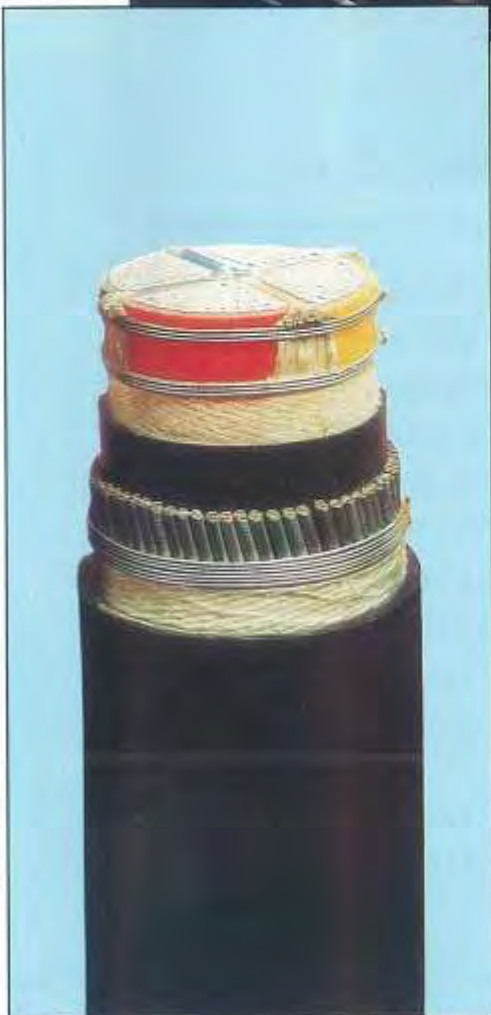


VICTOR CABLES CORPORATION LTD, an ISO 9001 Company, is a leading manufacturer of LT Cables in India. We are the pioneers introducing LT- XLPE Cables in India in technical collaboration with **Showa Electric Wire & Cable Co. Ltd, Japan (TOSHIBA Group)**.

The pioneering effort of our founder and team Victor brought a revolutionary change in the Electrical industry in India. With the inherent advantages of XLPE (Cross Linked Polyethylene) over the conventional PVC (Polyvinyl Chloride), VICTOR CABLES brought to you a technologically superior product — a new generation cable with tomorrow in mind.

LT- XLPE Cables have fast replaced PVC Cables in a big way and find varied applications in every field in the Electrical industry.

This brochure depicts the range of products manufactured by us as well as the current ratings of XLPE Cables vis-à-vis PVC Cables.



• RANGE OF OUR PRODUCTS •

**XLPE and FR-XLPE Insulated
Power & Control Cables:
conforming to IS 7098
(Part I & II)**

- a) Single core cables upto 1000 sq. mm. (armoured and unarmoured).
- b) Multi-core cables upto 630 sq. mm. (armoured and unarmoured).
- c) Mining cables with Copper Conductor (Double wire armoured).
- d) Multi-core Control Cables with Copper Conductor (armoured and unarmoured).
- e) Cables with flame retardant sheath.



PVC Insulated Power, Control and Signalling Cables (1100 & 6600 volts) conforming to IS 1554 (Part I & II)

- a) Single core cables upto 1000 sq. mm. (armoured and unarmoured).
- b) Multi-core cables upto 630 sq. mm.(armoured and unarmoured).
- c) Mining cables with Copper Conductor (Double wire armoured).
- d) Multi-core Cables with Copper Conductor (armoured and unarmoured).
- e) Multi core signalling cables with Copper conductor (Solid or Stranded) of Conductor size 1.5 sq. mm. and 2.5 sq. mm. (upto 61 cores).

Special Cables

- a) Flame Retardant Low Smoke (FRLS) Power and Control Cables.
- b) Aerial Bunched Cables (ABC) for Rural Electrification.
- c) Fire Survival (FS) Cables.
- d) Cables for use in low temperature areas.
- e) Advanced Elastomeric Cables.
- f) Cables as per customer's specifications.





KNOW THE SUPERIOR PRODUCT The LT-XLPE Cable

- LT-XLPE cables have a higher conductor temperature rating i.e. 90°C as against 70°C of PVC and hence higher current rating.
- LT-XLPE cables have longer life as compared to conventional PVC Cables.
- Max. temperature limit under short circuit conditions for LT-XLPE Cables is 250°C as against 160°C for PVC Cables. Hence, XLPE Cables have higher short circuit rating.
- LT-XLPE Cables have higher emergency overload capacity than PVC Cables (upto 60%).
- The moisture resistance of LT-XLPE cables is nearly 100 times that of PVC.
- Insulation resistance of LT-XLPE Cables is very high compared to PVC (as high as 1000 times).
- LT-XLPE Cables have high corrosion resistance in polluted atmosphere as compared to PVC Cables.
- LT-XLPE Cables have low installation cost because of light weight, dimensions and are far more flexible.
- LT-XLPE cables have better properties of resistance to chemical and corrosive gases.
- LT-XLPE cables have better properties to withstand vibrations, hot impacts.
- Jointing of LT-XLPE Cables is easier and quicker.
- LT-XLPE Cables are ideal for transmission and distribution of power.

OVERALL DIAMETER OF 1.1 KV, 3½ CORE, XLPE/PVC INSULATED, PVC SHEATHED (ARMoured & UNARMoured) CABLES

Nominal Area of the Conductor	Approx. Overall Diameter (mm)					
	Unarmoured		Flat Strip Armoured		Wire Armoured	
	PVC	XLPE	PVC	XLPE	PVC	XLPE
mm ²						
25	(24.9)	23.4	(26.6)	25.1	(28.2)	26.8
35	(27.3)	25.8	(29.0)	27.1	(30.7)	29.2
50	(29.4)	27.5	(31.5)	29.2	(33.2)	31.3
70	(33.3)	31.8	(35.0)	33.5	(37.5)	36.0
95	(38.0)	35.5	(39.7)	37.2	(42.6)	39.7
120	(41.5)	39.0	(43.2)	41.1	(46.1)	43.6
150	(45.2)	42.9	(47.3)	44.6	(49.8)	47.6
185	(50.1)	44.1	(52.2)	49.8	(55.8)	53.8
140	(56.9)	54.0	(58.6)	55.7	(62.6)	59.6
300	(63.2)	60.0	(64.9)	61.6	(70.4)	65.6
400	(70.5)	67.4	(72.6)	69.1	(77.6)	74.6
500	(79.7)	75.4	(84.1)	77.1	(88.5)	82.5

RATING FACTORS FOR CABLES

The current ratings of Cables given in the above tables are based on the following assumptions :

1. Maximum conductor temperature for continuous operation : 90° C (XLPE) / 70° C (PVC)
2. Ambient Air Temperature : 40° C
3. Ambient ground Temperature : 30° C
4. Thermal resistivity of soil : 150° C cm Watt.
5. Depth of laying :
 - a) 1.1 KV cables : 75 cm
 - b) 3.3, 6.6 KV cables : 90 cm

CURRENT RATING (IN GROUND) FOR XLPE INSULATED 1.1 KV GRADE CABLES								
Nominal Area of the Conductor mm ²	Aluminium Conductor				Copper Conductor			
	Singlecore		Multicore		Singlecore		Multicore	
	PVC	XLPE	PVC	XLPE	PVC	XLPE	PVC	XLPE
10	(51)	55	(46)	50	(65)	71	(60)	65
16	(66)	74	(60)	68	(85)	95	(77)	87
25	(86)	98	(76)	90	(110)	125	(99)	115
35	(100)	118	(92)	108	(130)	150	(120)	138
50	(120)	137	(110)	126	(155)	175	(145)	161
70	(140)	172	(135)	158	(190)	220	(175)	202
95	(175)	204	(165)	187	(220)	260	(210)	239
120	(195)	234	(185)	215	(250)	301	(240)	276
150	(220)	262	(210)	240	(280)	336	(270)	308
185	(240)	298	(235)	273	(305)	381	(300)	350
240	(270)	344	(275)	316	(345)	441	(345)	405
300	(295)	387	(305)	355	(375)	496	(385)	455
400	(325)	458	(335)	420	(400)	586	(425)	538
500	(345)	495	-	-	(425)	635	-	-
630	(390)	555	-	-	(470)	710	-	-
800	(440)	625	-	-	-	-	-	-
1000	(490)	685	-	-	-	-	-	-

RATING FACTORS FOR VARIATION IN AMBIENT AIR TEMPERATURE			
AIR TEMPERATURE (° C)	40	45	50
RATING FACTOR (XLPE)	1.00	0.94	0.88
RATING FACTOR (PVC)	1.00	0.90	0.81

CURRENT RATING (IN GROUND) FOR XLPE INSULATED 3.3 KV GRADE CABLES

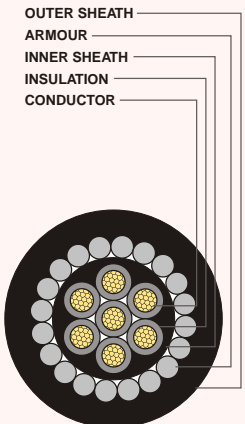
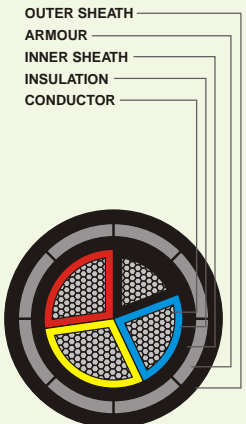
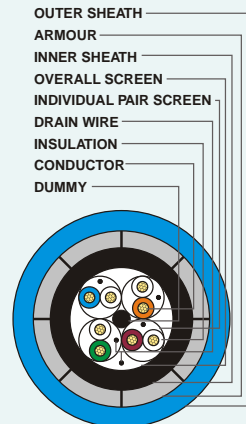
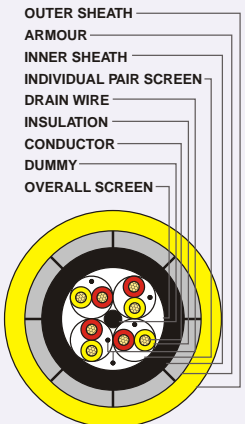
Nominal Area of the Conductor mm ²	Aluminium Conductor				Copper Conductor			
	Singlecore		Multicore		Singlecore		Multicore	
	PVC	XLPE	PVC	XLPE	PVC	XLPE	PVC	XLPE
10	(47)	64	(40)	50	(60)	81	(52)	64
16	(64)	82	(51)	64	(82)	104	(66)	82
25	(84)	108	(70)	85	(110)	139	(90)	109
35	(105)	130	(86)	102	(130)	167	(110)	131
50	(130)	157	(105)	123	(165)	201	(135)	158
70	(155)	200	(130)	157	(205)	257	(165)	202
95	(190)	245	(155)	196	(245)	320	(200)	251
120	(220)	287	(180)	225	(280)	368	(230)	289
150	(250)	330	(205)	259	(320)	423	(265)	332
185	(290)	380	(240)	298	(370)	487	(305)	382
240	(335)	455	(280)	357	(425)	584	(355)	458
300	(380)	520	(315)	408	(475)	667	(400)	523
400	(435)	630	(375)	493	(550)	806	(455)	632
500	(480)	706	-	-	(590)	905	-	-
630	(550)	810	-	-	(660)	1040	-	-
800	-	940	-	-	-	-	-	-
1000	-	1050	-	-	-	-	-	-

RATING FACTORS FOR VARIATION IN GROUND TEMPERATURE

GROUND TEMPERATURE (° C)	30	35	40	45
RATING FACTOR (XLPE)	1.00	0.94	0.91	0.87
RATING FACTOR (PVC)	1.00	0.94	0.87	0.79

PRODUCT RANGE

Victor Cables offers extensive expertise in design, development and manufacture of Power, Control, Instrumentation, Thermocouple extension/Compensating Cables conforming to Indian/international standards and customer specifications. The products include:

Applications	Cables (upto 1.1 KV)	LT (Low Tension) Power Cables (upto 1.1 KV)	Instrumentation, Signal and Data Cables	Thermocouple Extension / Compensating Cables
	Used in inter-connection of Process Control, Communication and Panel Control Systems	Used in connection of Power Supply to Residential, Commercial & Industrial Units	Used in Data Acquisition Systems, Computer Networking, PA Systems, Digital Control / Measuring & Communication Systems. Specially designed to transmit signals without any external interference	Used to extend Thermocouple Circuits from the sensor to reference unit
Type & Size	PVC / XLPE Insulated Cables conforming to IS:1554-I:88 / IS:7098-I:88, BS:6346, IEC:60502, BS:5467 Generally manufactured with conductor sizes 1.5 / 2.5 / 4.0 sq.mm	PVC / XLPE insulated cables conforming to IS:1554-I:88 / IS:7098-I:88, BS:6346, IEC:60502, BS:5467 Single Core Cables upto 630 sq.mm;	Generally manufactured with conductor sizes 0.5 / 0.75 / 1.0 / 1.5 sq.mm. Conforming to BS:5308-I & II, IEC-189, IS:1554-I:88, VDE 0815, IEC:60227	Generally manufactured with conductor sizes 16, 18 & 20AWG. Conforming to IS:8784, BS:4937, IEC-584, ANSI:MC:96.1, DIN, JIS
Options	Conductor: Solid / Stranded, Circular / Shaped, Copper / Aluminium Insulation: PVC – GP / HR; XLPE, LSZH Inner Sheath: PVC– GP / HR / FR / FRLS; LSZH Armour (for Armoured Cables): Galvanised Steel Round Wire / Flat Strip or Aluminium Wire Outer Sheath: PVC – GP / HR / FR / FRLS; LSZH	Conductor: Solid / Stranded, Circular / Shaped, Copper / Aluminium Insulation: PVC – GP / HR; XLPE, LSZH Inner Sheath: PVC – GP / HR / FR / FRLS; LSZH Armour (for Armoured Cables): Galvanised Steel Round Wire / Flat Strip or Aluminium Wire Outer Sheath: PVC – GP / HR / FR / FRLS; LSZH	Conductor: Solid / Stranded / Flexible Copper (Bare / Tinned) Insulation: PVC – GP / HR; PE, LSZH Shielding: Individual & overall or overall screen only by Al-mylar tape / copper tape / copper wire braid Inner Sheath: PVC – GP / HR / FR / FRLS; PE, LSZH Armour (for Armoured Cables): Galvanised Steel Round Wire / Strip Outer Sheath: PVC – GP / HR / FR / FRLS; PE, LSZH	Conductor: Solid / Stranded Type: KX, VX, TX, JX, EX, SX/RX Insulation: PVC – GP / HR; PE, LSZH Shielding: Individual & overall or overall screen only by Al-mylar tape / copper tape / copper wire braid Inner sheath: PVC – GP / HR / FR / FRLS; PE, LSZH Armour (for Armoured Cables): Galvanised Steel Round Wire / Strip Outer Sheath: PVC – GP / HR / FR / FRLS; PE, LSZH
Sectional View				



SOME OF OUR ESTEEMED CLIENTS

- National Thermal Power Corporation Ltd. (NTPC)
- Delhi Electric Supply Undertaking (DESU)
- Bombay Electric Supply & Transport Undertaking (BEST)
- Bombay Suburban Electric Supply Co. Ltd. (BSES)
- Bharat Heavy Electricals Limited (BHEL)
- Engineers India Ltd. (EIL)
- Indian Oil Corporation Ltd. (IOCL)
- Neyveli Lignite Corporation Ltd. (NLC)
- Ahmedabad Electricity Co. Ltd.
- International Airport Authority of India (IAAI)
- Surat Electricity Co. Ltd.
- Directorate General for Supplies & Disposals (D.G.S. & D.)
- Railways
- State Electricity Boards.
- Oil & Natural Gas Commission (ONGC)
- Visakapatnam Steel Plant
- Bhilai Steel Plant
- Nepal Electricity Authority
- Central Public Works Department (C.P.W.D)
- Coal Fields
- Thermal, Hydro and Atomic Power Projects

..... And Many More



Victor Cables

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An ISO 9001 Company