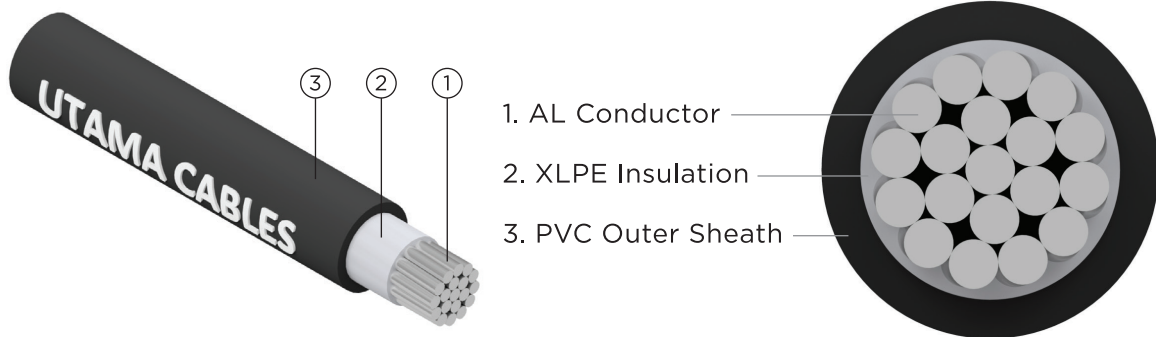




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 稳达电缆工业有限公司

XLPE INSULATED, PVC SHEATHED CABLE – AL/XLPE/PVC



APPLICATION

Single Core XLPE insulated and sheathed PVC cable. Suitable for use in power network, electrical wiring and energy distributions in underground, outdoor, indoor applications and in cable ducting.

STANDARDS

Design Specification	IEC 60502-1
Conductor	IEC 60228

CABLE CONSTRUCTION

Conductor	Plain Aluminium Conductor, Class 2, Stranded Circular or Compacted
Insulation	Cross-linked Polyethylene (XLPE) compound rated 90°C
Colour of Insulation	Natural
Outer Sheath	Polyvinyl Chloride (PVC) compound, PVC/ST-2
Outer Sheath Colour	Black

ELECTRICAL CHARACTERISTICS

Operating Voltage, U ₀ /U	600/1000 V	Test Voltage	3.5kV for 5 minutes
Operating Temperature	-15°C to 90°C	Max Conductor Temperature	90°C



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AL/XLPE/PVC - 1 CORE

Conductor		Number / Wire Diameter (No./mm)	Nominal Thickness of Insulation (mm)	Nominal Thickness of Sheath (mm)	Approx. Overall Diameter (mm)	Approx. Cable Weight (kg/km)
Nominal Cross-Sectional Area (mm ²)	Shape					
16	c.c	7/1.70	0.70	1.40	9.20	115
25	c.c	7/2.14	0.90	1.40	10.80	160
35	c.c	19/1.53	0.90	1.40	11.90	195
50	c.c	19/1.78	1.00	1.40	13.30	240
70	c.c	19/2.14	1.10	1.40	15.10	325
95	c.c	19/2.52	1.10	1.50	17.10	420
120	c.c	37/2.03	1.20	1.50	18.80	515
150	c.c	37/2.25	1.40	1.60	21.00	630
185	c.c	37/2.52	1.60	1.60	22.80	780
240	c.c	61/2.25	1.70	1.70	26.00	995
300	c.c	61/2.52	1.80	1.80	28.50	1220
400	c.c	61/2.85	2.00	1.90	32.30	1535
500	c.c	61/3.20	2.20	2.00	36.00	1910
630	c.c	61/3.65	2.40	2.20	40.80	2485

NOTE: **c.s.** - circular stranded conductor
c.c. - circular compacted stranded conductor
s.s. - sectoral stranded conductor, circular conductors can be produced on request.

The information contained within this datasheet is for guidance only and is subject to change without notice or liability. All the information is provided in good faith and is believed to be correct at the time of publication. When selecting cable accessories, please note that actual cable dimensions may vary due to manufacturing tolerances.



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XLPE INSULATED, PVC SHEATHED CABLE – AL/XLPE/PVC

Electrical Characteristic – AL/XLPE/PVC Single Core Cables

Table B2.1: Current Carrying Capacity

Conductor Cross-Sectional Area (mm ²)	Reference Method A (Enclosed in Conduit in Thermally Insulating Wall etc.)		Reference Method B (Enclosed in Conduit/Trunking)		Reference Method C (Clipped Direct)		Reference Method F (In Free Air or On A Perforated Cable Tray, Horizontal or Vertical)			Reference Method G (In Free Air) Spaced by One Cable Diameter	
	2 Cables, Single-Phase AC or DC (Amp)	3 or 4 Cables, Three-Phase AC (Amp)	2 Cables, Single-Phase AC or DC (Amp)	3 or 4 Cables, Three-Phase AC (Amp)	2 Cables, Single-Phase AC or DC, Flat and Touching (Amp)	3 or 4 Cables, Three-Phase AC, Flat and Touching or Trefoil (Amp)	2 Cables, Single-Phase AC or DC, Flat or Touching (Amp)	3 Cables, Three-Phases AC, Touching (Amp)		2 Cables, Single-Phase AC or DC or 3 Cables Three-Phase AC, Flat (Amp)	
								Flat	Trefoil	Horizontal	Vertical
50	125	113	157	140	154	136	184	165	159	210	188
70	158	142	200	179	198	174	237	215	206	271	244
95	191	171	242	217	241	211	289	264	253	332	300
120	220	197	281	251	280	245	337	308	296	387	351
150	253	226	307	267	324	283	389	358	343	448	408
185	288	256	351	300	371	323	447	413	395	515	470
240	338	300	412	351	439	382	530	492	471	611	561
300	387	344	471	402	508	440	613	571	544	708	652
400	-	-	-	-	-	-	679	628	638	798	742
500	-	-	-	-	-	-	786	728	743	927	865
630	-	-	-	-	-	-	903	836	849	1058	990

Ambient Air Temp 30°C

Conductor Operating Temp 90°C

NOTE:

- Where a conductor operates at a temperature exceeding 70°C it must be ascertained that the equipment connected to the conductor is suitable for the conductor operating temperature, see Regulation 512.1.2 of the 18th Edition of IEE Wiring Regulations).
- Where cables in this table are connected to equipment or accessories designed to operate at a temperature not exceeding 70°C, the current ratings given in the equivalent table for 70°C thermoplastic insulated cables must be used (see also Regulation 523.1 of the 18th Edition of IEE Wiring Regulations).
- The above table is in accordance with 18th Edition of IEE Wiring Regulations.



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XLPE INSULATED, PVC SHEATHED CABLE – AL/XLPE/PVC

Table B2.2: Voltage Drop

Conductor Size (mm ²)	2 Cables, DC (mV/A/m)	2 Cables, Single-Phase AC									3 or 4 Cables, Three-Phase AC											
		Reference Methods A & B (Enclosed In Conduit/Trunking) (mV/A/m)			Reference Methods C, F & G (Clipped Direct, On Cable Tray or In Free Air)						Reference Methods A & B (Enclosed In Conduit/Trunking) (mV/A/m)			Reference Methods C, F & G (Clipped Direct, On Cable Tray or In Free Air)								
		r	x	z	Cable Touching (mV/A/m)			Cable Spaced* (mV/A/m)			r	x	z	Cables Touching, Trefoil (mV/A/m)			Cables Touching, Flat (mV/A/m)			Cables Spaced*, Flat (mV/A/m)		
50	1.650	1.700	0.300	1.720	1.650	0.190	1.660	1.650	0.280	1.680	1.440	0.260	1.460	1.440	0.165	1.450	1.440	0.240	1.460	1.440	0.320	1.480
70	1.130	1.170	0.300	1.210	1.120	0.185	1.140	1.120	0.270	1.150	1.000	0.260	1.040	0.970	0.160	0.980	0.970	0.240	1.000	0.970	0.310	1.020
95	0.820	0.860	0.290	0.910	0.820	0.185	0.840	0.820	0.270	0.940	0.750	0.250	0.790	0.710	0.160	0.730	0.710	0.230	0.750	0.710	0.310	0.780
120	0.650	0.680	0.290	0.740	0.650	0.180	0.670	0.650	0.270	0.700	0.590	0.250	0.640	0.570	0.155	0.590	0.570	0.230	0.610	0.570	0.310	0.640
150	0.530	0.540	0.280	0.610	0.520	0.175	0.550	0.520	0.260	0.580	0.480	0.240	0.540	0.450	0.155	0.470	0.450	0.230	0.500	0.450	0.300	0.540
185	0.420	0.450	0.280	0.530	0.430	0.175	0.460	0.420	0.260	0.490	0.380	0.240	0.450	0.360	0.150	0.390	0.360	0.230	0.430	0.360	0.300	0.470
240	0.320	0.340	0.270	0.430	0.320	0.170	0.360	0.320	0.260	0.410	0.300	0.240	0.380	0.280	0.150	0.320	0.280	0.220	0.350	0.280	0.300	0.410
300	0.260	0.280	0.270	0.380	0.260	0.170	0.310	0.260	0.260	0.360	0.250	0.230	0.340	0.220	0.145	0.270	0.220	0.220	0.310	0.220	0.300	0.370
400	0.200	-	-	-	0.210	0.165	0.270	0.210	0.250	0.330	0.200	0.230	0.310	0.180	0.145	0.230	0.180	0.220	0.280	0.180	0.290	0.340
500	0.160	-	-	-	0.170	0.165	0.230	0.165	0.250	0.300	0.165	0.230	0.280	0.150	0.140	0.200	0.150	0.220	0.270	0.145	0.290	0.320
630	0.130	-	-	-	0.140	0.165	0.210	0.135	0.250	0.280	0.135	0.220	0.260	0.120	0.140	0.185	0.120	0.220	0.250	0.120	0.290	0.310

Ambient Air Temp 30°C
 Conductor Operating Temp 90°C

NOTE:

- *Spacings larger than one cable diameter will result in a larger voltage drop.
- Correction factors for ambient temperature and group installation, please refer Derating Factor section.
- r = Resistive Component, x = Reactive Component, z = Impedance Value
 The above table is in accordance with the 18th Edition of IEE Wiring Regulations.
- For cables having conductors of 16mm² or less cross-sectional area their inductances can be ignored and (mV/A/m)_r values only are tabulated. For cables having conductors greater than 16mm², cross-sectional area the impedance values are given as (mV/A/m)_z, together with the resistive component (mV/A/m)_r and the reactive component (mV/A/m)_x.
 The above paragraph is extracted from Appendix 4 of the 18th Edition of IEE Wiring Regulations.

Utama Cables has taken reasonable measures to ensure that the information and data represented in this catalogue is accurate and current. However, the manufacturer reserves the right to modify specification of any of the products at their discretion and without notice. The manufacturer can accept no responsibility as to the sustainability of any product for a particular use, or for any errors or omissions, unintentional or otherwise.