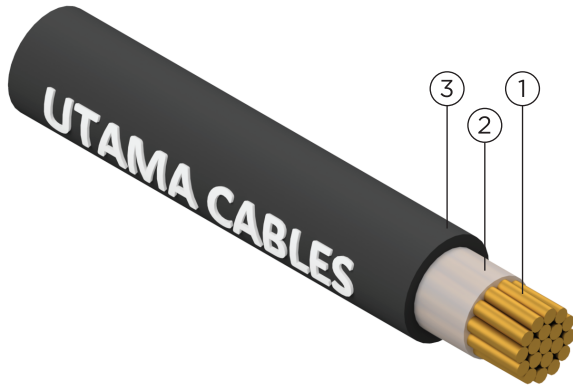




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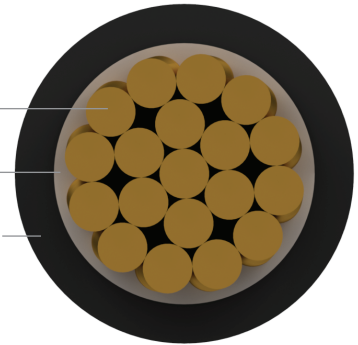
XLPE INSULATED, PVC SHEATHED CABLE – CU/XLPE/PVC



1. Cu Conductor

2. XLPE Insulation

3. PVC Outer Sheath



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 Annealed Copper, 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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XLPE INSULATED, PVC SHEATHED CABLE — CU/XLPE/PVC

CU/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	1.80	9.40	217
25	c.c	7/2.14	0.90	1.80	11.00	321
35	c.c	19/1.53	0.90	1.80	12.10	423
50	c.c	19/1.78	1.00	1.80	13.50	550
70	c.c	19/2.14	1.10	1.80	15.30	765
95	c.c	19/2.52	1.10	1.80	17.30	1035
120	c.c	37/2.03	1.20	1.80	19.00	1285
150	c.c	37/2.25	1.40	1.80	21.20	1575
185	c.c	37/2.52	1.60	1.80	23.00	1955
240	c.c	61/2.25	1.70	1.90	26.30	2535
300	c.c	61/2.52	1.80	1.90	28.80	3155
400	c.c	61/2.85	2.00	2.10	32.50	4005
500	c.c	61/3.20	2.20	2.20	36.40	5015
630	c.c	61/3.65	2.40	2.30	41.20	6520

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



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

Electrical Characteristic – XLPE/PVC Single Core Cables

Table A4.1: 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 On A Wall or In Trunking etc.)		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 (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
1	14	13	17	15	19	17.5	-	-	-	-	-
1.5	19	17	23	20	25	23	-	-	-	-	-
2.5	26	23	31	28	34	31	-	-	-	-	-
4	35	31	42	37	46	41	-	-	-	-	-
6	45	40	54	48	59	54	-	-	-	-	-
10	61	54	75	66	81	74	-	-	-	-	-
16	81	73	100	88	109	99	-	-	-	-	-
25	106	95	133	117	143	130	161	141	135	182	161
35	131	117	164	144	176	161	200	176	169	226	201
50	158	141	198	175	228	209	242	216	207	275	246
70	200	179	253	222	293	268	310	279	268	353	318
95	241	216	306	269	355	326	377	342	328	430	389
120	278	249	354	312	413	379	437	400	383	500	454
150	318	285	393	342	476	436	504	464	444	577	527
185	362	324	449	384	545	500	575	533	510	661	605
240	424	380	528	450	644	590	679	634	607	781	719
300	486	435	603	514	743	681	783	736	703	902	833
400	-	-	683	584	868	793	940	868	823	1085	1008
500	-	-	783	666	990	904	1083	998	946	1253	1169
630	-	-	900	764	1130	1033	1254	1151	1088	1454	1362
800	-	-	-	-	1288	1179	1358	1275	1214	1581	1485
1000	-	-	-	-	1443	1323	1520	1436	1349	1775	1671

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 — CU/XLPE/PVC

Conductor Size (mm ²)	2 Cables, DC (mV/A/m)	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 C, F & G (Clipped Direct, On Cable Tray or In Free Air)											
					Cable Touching (mV/A/m)			Cable Spaced* (mV/A/m)			Reference Methods A & B (Enclosed in Conduit/Trunking) (mV/A/m)			Cables Touching, Trefoil (mV/A/m)			Cables Touching, Flat (mV/A/m)			Cables Spaced*, Flat (mV/A/m)		
		r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z
1.0	46.000	46.000			46.000			46.000			40.000			40.000			40.000			40.000		
1.5	31.000	31.000			31.000			31.000			27.000			27.000			27.000			27.000		
2.5	19.000	19.000			19.000			19.000			16.000			16.000			16.000			16.000		
4	12.000	12.000			12.000			12.000			10.000			10.000			10.000			10.000		
6	7.900	7.900			7.900			7.900			6.800			6.800			6.800			6.800		
10	4.700	4.700			4.700			4.700			4.000			4.000			4.000			4.000		
16	2.900	2.900			2.900			2.900			2.500			2.500			2.500			2.500		
25	1.850	1.850	0.310	1.900	1.850	0.190	1.850	1.850	0.280	1.850	1.600	0.270	1.650	1.600	0.165	1.600	1.600	0.190	1.600	1.600	0.270	1.650
35	1.350	1.350	0.290	1.350	1.350	0.180	1.350	1.350	0.270	1.350	1.150	0.250	1.150	1.150	0.155	1.150	1.150	0.180	1.150	1.150	0.260	1.200
50	0.990	1.000	0.290	1.050	0.990	0.180	1.000	0.990	0.270	1.000	0.870	0.250	0.900	0.860	0.155	0.870	0.860	0.180	0.870	0.860	0.260	0.890
70	0.680	0.700	0.280	0.750	0.680	0.175	0.710	0.680	0.260	0.730	0.600	0.240	0.650	0.590	0.150	0.610	0.590	0.175	0.620	0.590	0.250	0.650
95	0.490	0.510	0.270	0.580	0.490	0.170	0.520	0.490	0.260	0.560	0.440	0.230	0.500	0.430	0.145	0.450	0.430	0.170	0.460	0.430	0.250	0.490
120	0.390	0.410	0.260	0.480	0.390	0.165	0.430	0.390	0.250	0.470	0.350	0.230	0.420	0.340	0.140	0.370	0.340	0.165	0.380	0.340	0.240	0.420
150	0.320	0.330	0.260	0.430	0.320	0.165	0.360	0.320	0.250	0.410	0.290	0.230	0.370	0.280	0.140	0.310	0.280	0.165	0.320	0.280	0.240	0.370
185	0.250	0.270	0.260	0.370	0.260	0.165	0.300	0.250	0.250	0.360	0.230	0.230	0.320	0.220	0.140	0.260	0.220	0.165	0.280	0.220	0.240	0.330
240	0.190	0.210	0.260	0.330	0.200	0.160	0.250	0.195	0.250	0.310	0.185	0.220	0.290	0.170	0.140	0.220	0.170	0.165	0.240	0.170	0.240	0.290
300	0.155	0.175	0.250	0.310	0.160	0.160	0.220	0.155	0.250	0.290	0.150	0.220	0.270	0.140	0.140	0.195	0.135	0.160	0.210	0.135	0.240	0.270
400	0.120	0.140	0.250	0.290	0.130	0.155	0.200	0.125	0.240	0.270	0.125	0.220	0.250	0.110	0.135	0.175	0.110	0.160	0.195	0.110	0.240	0.260
500	0.093	0.120	0.250	0.280	0.105	0.155	0.185	0.098	0.240	0.260	0.100	0.220	0.240	0.090	0.135	0.160	0.088	0.160	0.180	0.085	0.240	0.250
630	0.072	0.100	0.250	0.270	0.086	0.155	0.175	0.078	0.240	0.250	0.088	0.210	0.230	0.074	0.135	0.150	0.071	0.160	0.170	0.068	0.230	0.240
800	0.056	-	-	-	0.072	0.150	0.170	0.064	0.240	0.250	-	-	-	0.062	0.130	0.145	0.059	0.155	0.165	0.055	0.230	0.240
1000	0.045	-	-	-	0.063	0.150	0.165	0.054	0.240	0.240	-	-	-	0.055	0.130	0.140	0.050	0.155	0.165	0.047	0.230	0.240

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.

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.