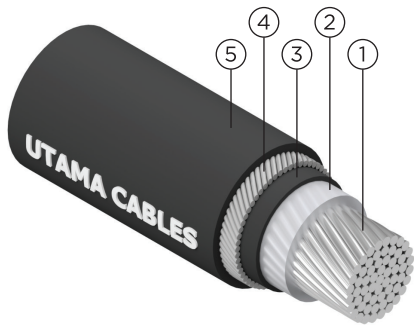


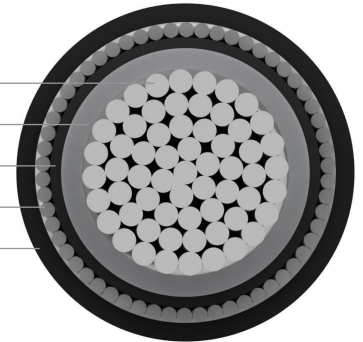


UTAMA CABLES
 稳达电缆工业有限公司

XLPE INSULATED, ALUMINIUM WIRE ARMoured, PVC SHEATHED ARMoured CABLE – AL/XLPE/AWA/PVC



1. Aluminium Conductor
2. XLPE Insulation
3. Bedding
4. Aluminium Wire Armoured
5. PVC Outer Sheath



APPLICATION

Single core XLPE insulated cable with aluminium wire armour (AWA). For use in power networks, underground, indoor and outdoor application, and also in cable ducting.

STANDARDS

Design Specification	IEC 60502-1
Conductor	IEC 60228

CABLE CONSTRUCTION

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



UTAMA CABLES
稳达电缆工业有限公司

XLPE INSULATED, ALUMINIUM WIRE ARMoured, PVC SHEATHED ARMoured CABLE – AL/XLPE/AWA/PVC

AL/XLPE/AWA/PVC - 1 CORE

Conductor		Number/ Wire Diameter (No./mm)	Nominal Thickness of Insulation (mm)	Armour Wire Diameter (mm)	Nominal Thickness of Sheath (mm)	Approx. Overall Diameter (mm)	Approx. Cable Weight (kg/km)
Nominal Cross-Sectional Area (mm ²)	Shape						
50	c.c	19/1.78	1.00	1.25	1.80	18.80	760
70	c.c	19/2.14	1.10	1.25	1.80	20.60	985
95	c.c	19/2.52	1.10	1.25	1.80	22.40	1260
120	c.c	37/2.03	1.20	1.60	1.80	24.80	1645
150	c.c	37/2.25	1.40	1.60	1.80	26.80	1970
185	c.c	37/2.52	1.60	1.60	1.80	28.60	2385
240	c.c	61/2.25	1.70	1.60	1.90	31.80	3020
300	c.c	61/2.52	1.80	1.60	1.90	34.20	3665
400	c.c	61/2.85	2.00	2.00	2.10	39.40	4740
500	c.c	61/3.20	2.20	2.00	2.20	43.20	5830
630	c.c	61/3.65	2.40	2.00	2.30	48.00	7390

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



UTAMA CABLES
 稳达电缆工业有限公司

XLPE INSULATED, ALUMINIUM WIRE ARMoured, PVC SHEATHED ARMoured CABLE – AL/XLPE/AWA/PVC

Electrical Characteristic – XLPE/AWA/PVC Aluminium Wire Armoured Cables

Table B4.1: Current Carrying Capacity

Conductor Cross-Sectional Area (mm ²)	Reference Method C (Clipped Direct)		Reference Method F (In Free Air or On A Perforated Cable Tray, Horizontal or Vertical)								
	Touching		Touching			Spaced by One Cable Diameter					
	2 Cables, Single-Phase AC or DC, Flat (Amp)	3 or 4 Cables, Three-Phase AC, Flat (Amp)	2 Cables, Single-Phase AC or DC, Flat (Amp)	3 Cables, Three-Phase AC (Amp)		2 Cables, DC (Amp)		2 Cables, Single-Phase AC (Amp)		3 or 4 Cables, Three-Phase AC (Amp)	
				Flat	Trefoil	Horizontal	Vertical	Horizontal	Vertical	Horizontal	Vertical
50	179	165	192	176	162	216	197	212	199	215	192
70	228	209	244	222	207	275	253	269	254	270	244
95	276	252	294	267	252	332	307	328	310	324	296
120	320	291	340	308	292	384	357	378	358	372	343
150	368	333	390	352	337	441	411	429	409	424	394
185	419	378	444	400	391	511	480	490	467	477	447
240	494	443	521	468	465	605	572	576	549	554	523
300	568	508	597	536	540	701	666	654	624	626	595
400	655	573	688	608	625	812	780	735	704	693	649
500	747	642	786	685	714	942	906	825	790	765	717
630	836	706	880	757	801	1076	1036	909	872	832	780

Ambient Air Temp 30°C

Ambient Ground Temp 20°C

Conductor Operating Temp 70°C

Soil Thermal Resistivity (cable buried in ground): 2.5 K.m/W

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.



UTAMA CABLES
稳达电缆工业有限公司

XLPE INSULATED, ALUMINIUM WIRE ARMoured, PVC SHEATHED ARMoured CABLE – AL/XLPE/AWA/PVC

Table B4.2: Voltage Drop

Conductor Cross-Sectional Area (mm ²)	On Cable Tray or In Free Air															
	2 Cables, DC (mV/A/m)	2 Cables, Single-Phase AC(mV/A/m)						3 or 4 Cables, Three-Phase AC								
		Cable Touching (mV/A/m)			Cable Spaced* (mV/A/m)			Cables Trefoil, Touching (mV/A/m)			Cables Flat, Touching (mV/A/m)			Cables Flat, Spaced* (mV/A/m)		
	r	x	z	r	x	z	r	x	z	r	x	z	r	x	z	
50	1.600	1.600	0.220	1.600	1.600	0.300	1.600	1.400	0.185	1.400	1.400	0.260	1.400	1.350	0.340	1.400
70	1.100	1.100	0.210	1.150	1.100	0.290	1.150	0.960	0.180	0.980	0.970	0.250	1.000	0.990	0.330	1.050
95	0.820	0.830	0.200	0.850	0.850	0.290	0.900	0.710	0.175	0.740	0.740	0.250	0.780	0.760	0.320	0.830
120	0.660	0.660	0.200	0.690	0.690	0.280	0.740	0.570	0.170	0.600	0.600	0.240	0.640	0.630	0.310	0.700
150	0.520	0.530	0.195	0.570	0.560	0.280	0.620	0.460	0.170	0.490	0.490	0.240	0.540	0.520	0.300	0.600
185	0.420	0.430	0.190	0.470	0.460	0.270	0.540	0.380	0.165	0.410	0.400	0.240	0.470	0.440	0.300	0.530
240	0.320	0.340	0.185	0.390	0.370	0.270	0.450	0.290	0.165	0.340	0.320	0.230	0.390	0.350	0.290	0.460
300	0.260	0.270	0.185	0.330	0.300	0.260	0.400	0.240	0.160	0.290	0.260	0.230	0.340	0.290	0.290	0.410
400	0.210	0.230	0.180	0.290	0.260	0.250	0.360	0.195	0.155	0.250	0.230	0.220	0.320	0.270	0.270	0.380
500	0.160	0.185	0.175	0.250	0.230	0.250	0.340	0.160	0.155	0.220	0.200	0.210	0.290	0.240	0.260	0.350
630	0.130	0.160	0.175	0.240	0.200	0.240	0.310	0.135	0.150	0.200	0.175	0.210	0.270	0.220	0.250	0.330

Ambient Air Temp 30°C

Ambient Ground Temp 20°C

Conductor Operating Temp 70°C

Soil Thermal Resistivity (cable buried in ground): 2.5 K.m/W

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.