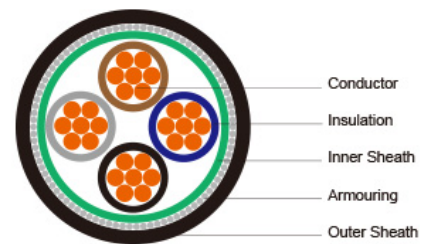


300/500V XLPE Insulated, PVC Sheathed Power Cables (2-4 Cores)



(CU/XLPE/PVC 300/500V Class 2)

(CU/XLPE/PVC/SWA/PVC 300/500V Class 2)

Application:

The cables are mainly used in power stations, mass transit underground passenger systems, airports, petrochemical plants, hotels, hospitals, and high-rise buildings.

STANDARDS:

Basic design adapted to IEC 60502-1; BS 5467

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)**

EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*

Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)**

EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Note: Asterisk ** denotes that the standard compliance is optional, depending on the oxygen index of the PVC compound and the cable design.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Extruded cross-linked XLPE compound.

Inner Sheath (optional): PVC Compound

Armouring (optional): Galvanized Steel Wire

Outer Sheath: Thermoplastic PVC compound. UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design. LSPVC can also be provided upon request.

COLOUR CODE

Insulation Colour as per BS7671

	With Earth Conductor	Without Earth Conductor
2Cores	-	Brown, Blue
3Cores	Yellow/Green, Brown, Blue	Brown, Gray, Black
4Cores	Yellow/Green, Brown, Gray, Black	Brown, Gray, Black, Blue
5Cores	Yellow/Green, Brown, Gray, Black, Blue	Brown, Gray, Black, Blue, Black
Above 5 Cores	Yellow/Green, Black Numbered	Black Numbered

Sheath Colour: Black (other colors upon request)

Physical AND THERMAL PROPERTIES

Temperature range during operation: Max.90°C for XLPE

250°C in short-circuit for 5secs max.

Minimum bending radius: 6 x Overall Diameter (unarmoured cable)

10 x Overall Diameter (armoured cable)

CONSTRUCTION PARAMETERS

Conductor			Unarmoured		Armoured			
No. of Core Cross Section	X No./Nominal Diameter of Strands	Nominal Insulation Thickness	Nominal Overall Diameter	Approx. Weight	Diameter Under Armour	Armour Wire Diameter	Nominal Overall Diameter	Approx. Weight
			mm	kg/km	mm	mm	mm	kg/km
Noxmm2	No./mm	mm	mm	kg/km	mm	mm	mm	kg/km
2x1.5	7/0.53	0.50	6.5	65	6.5	0.9	11.2	246
2x2.5	7/0.67	0.50	7.3	91	7.3	0.9	12.0	292
2x4	7/0.85	0.50	8.4	131	8.4	0.9	13.1	360
3x1.5	7/0.53	0.50	6.9	81	6.9	0.9	11.6	275
3x2.5	7/0.67	0.50	7.8	116	7.8	0.9	12.5	331
3x4	7/0.85	0.50	9.0	169	9.0	0.9	13.7	413
4x1.5	7/0.53	0.50	7.6	101	7.6	0.9	12.3	309
4x2.5	7/0.67	0.50	8.6	144	8.6	0.9	13.3	380
4x4	7/0.85	0.50	9.9	213	9.9	0.9	14.6	479

Electrical Properties

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

Current-Carrying Capacities (Amp)

Conductor or cross-sectional area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray, horizontal or vertical)		Reference Method 12 (free air)		
	Horizontal flat spaced	Vertical flat spaced	Trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil	Horizontal flat spaced	Vertical flat spaced	Trefoil		
2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c. or d.c. flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or flat and touching	3 or 4 cables, 3-phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or 3 cables three phase	2 cables, single-phase a.c. or d.c. or 3 cables	3 cables, trefoil 3-phase a.c.	

										three phase	
1	2	3	4	5	6	7	8	9	10	11	12
mm2	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-

Voltage Drop (Per Amp Per Meter)

Nominal Cross Section Area	2 cables d.c.	2 cables, single-phase a.c.		3 or 4 cables, 3-phase a.c.		
		Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1 and 11 (clipped direct or on trays touching)	Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1, 11 and 12 (in trefoil)	Ref. Methods 1 and 11 (Flat and touching)
1	2	3	4	5	6	7
mm2	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.5	31	31	27	27	27	27
2.5	19	19	16	16	16	16
4	33	12	10	10	10	10

Current-Carrying Capacities (Amp)

Conductor crosssectional area	Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated horizontal cable tray or Reference Method 13 [free air])		In single-way ducts		Laid direct in ground	
	one core cable single phase a.c. or d.c.	2- core or 3- core cable 3-phase a.c.	one core cable single phase a.c. or d.c.	2- core or 3- core cable 3-phase a.c.	one core cable single phase a.c. or d.c.	2- core or 3- core cable 3-phase a.c.	one core cable single phase a.c. or d.c.	2- core or 3- core cable 3-phase a.c.
1	2	3	4	5	6	7	8	9
mm2	A	A	A	A	A	A	A	A
1.5	27	23	29	25	-	23	-	28
2.5	36	31	39	33	-	30	-	36
4	49	42	52	44	-	40	-	48

Voltage Drop (Per Amp Per Meter)

Nominal Cross Section Area	2 cables d.c.	2 cables, single-phase a.c.	3 or 4 cables, 3-phase a.c.	2 cables, single-phase a.c.		3 or 4 cables, 3-phase a.c.	
				In ducts	or in	In ducts	or in

				ground	ground
1	2	3	4	5	6
mm ²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.5	31	31	27	31	25
2.5	19	19	16	19	15
4	12	12	10	12	9.7