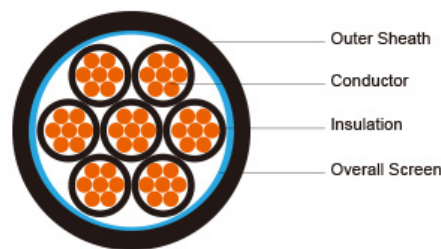


450/750V XLPE Insulated, PVC Sheathed, Screened Power Cables (Multicore)



CU/XLPE/CUTO/PVC 450/750V 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

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

450/750V

CABLE CONSTRUCTION

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

Insulation: Extruded cross-linked XLPE compound.

Filler, binder (if any): PP, PET, PVC

Overall Screen: Copper tape

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: 8 x Overall Diameter

CONSTRUCTION PARAMETERS

Conductor								
No. of Core X Cross Section	No./Nominal Diameter of Strands	Nominal Overall Diameter Conductor	Nominal Insulation Thickness	Nominal Copper Tape Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Max.Dc Resistance Of Conductor @20°C	Approx. Weight
7x1.0	7/0.44	1.32	0.7	0.1	1.3	13.9	18.1	309
7x1.5	7/0.53	1.59	0.7	0.1	1.4	14.8	12.1	366
7x2.5	7/0.44	2.01	0.7	0.1	1.4	16.2	7.41	468
12x1.5	7/0.53	1.59	0.7	0.1	1.5	18.9	12.1	560
12x2.5	7/0.67	2.01	0.7	0.1	1.5	20.8	7.41	727
19x1.5	7/0.53	1.59	0.7	0.1	1.6	21.9	12.1	786
19x2.5	7/0.67	2.01	0.7	0.1	1.6	24.2	7.41	1,037

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 three phase	3 cables, trefoil 3-phase a.c.
1	2	3	4	5	6	7	8	9	10	11	12
mm2	A	A	A	A	A	A	A	A	A	A	A

1.0	13	-	-	-	15	-	-	-	-	-	-
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 1, 11 and 12 (in trefoil)	Ref. Methods 1 and 11(Flat and touching)
1	2	3	4	6	7
mm ²	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.0	46	46	-	-	-
1.5	31	31	27	27	27
2.5	19	19	16	16	16
4	33	12	10	10	10