345/400 kV XLPE Power Cable

SW STANDARD WALL XLPE CORRUGATED SHEATH

CABLE CONSTRUCTION

- Concentric Stranded, Compact, or Segmental Copper or Alumimum Conductor
- Smooth Conductor Shield
- Super Clean XLPE Insulation
- True Triple Extrusion and Dry Cured
- Firmly Bonded Insulation Shield
- Copper or Aluminum Moisture Impervious Sheath
- Polyethylene Jacket with Extruded Semi-Conductive Outer Layer

CABLE DATA	
Voltage Characteristics (kV)	
Max Voltage Rating	420
BIL Rating	1300/1425
Temperatures (°C)	
Nominal Conductor	90
Max. Emergency Conductor	105
Short Circuit Conductor	250
Minimum Installation	-10
Design Characteristics	
Design Standards	AEIC, IEC
Factory Test Voltages (@400 kV)	440 kV / 60 min.
XLPE Loss Factor	0.0005
Relative Permittivity	2.3

Conductor Size (kcmil[1])	Conductor Dia.	Insulation Thickness	Diameter Over Insulation	Overall Jacket Diameter	Min. Bending Radius (install / perm.)	Capacitance	Charging Current	CU Cond & CU Sheath		AL Cond & AL Sheath	
								Cable Weight	30 mil Sheath[2] Short Ckt @ 0.5s	Cable Weight	50 mil Sheath[2] Short Ckt @ 0.5s
	(inches)	(mils)	(inches)	(inches)	(inches)	(pF/ft)	(A/kft)	(lbs/ft)	(kA)	(lbs/ft)	(kA)
1250	1.19	1260	3.88	4.91	89/59	38.37	3.37	11.73	56.6	8.24	63.5
1500	1.32	1181	3.85	5.00	90/60	42.75	3.72	12.41	57.7	8.37	64.7
1750	1.43	1142	3.88	5.03	91/61	45.73	3.98	13.17	58.0	8.60	65.1
2000	1.50	1142	3.95	5.12	93/62	47.32	4.12	14.17	59.1	9.01	66.2
2500	1.73	1063	4.05	5.23	95/63	54.58	4.75	15.78	60.3	9.58	67.6
3000	1.89	1063	4.28	5.50	99/66	59.13	5.15	17.89	63.4	10.59	71.1
3500	2.07	1063	4.38	5.62	102/68	61.24	5.33	19.70	64.9	11.31	72.7
4000	2.17	1063	4.48	5.74	104/69	63.19	5.50	21.48	66.2	12.02	74.2
5000	2.48	1063	4.79	6.10	110/74	69.32	6.04	26.04	70.5	13.68	79.0
6000	2.67	1063	4.99	6.33	114/76	73.13	6.37	28.93	73.2	15.12	81.9

Copper Conductor Size (kcmil[1]) Load Factor @ 75%											
Ampacity[3] @ 90°C; per Figures on Page 2		1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	900	990	1060	1110	1310	1430	1520	1600	1740	1820
Power Rating	MVA	624	686	734	769	908	991	1053	1109	1206	1261
Double Circuit (Fig 2)	Amps	760	820	880	920	1070	1160	1220	1290	1380	1440
Power Rating	MVA	527	568	610	637	741	804	845	894	956	998

Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%											
Ampacity[3] @ 90°C; per Figures on Page 2		1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	720	790	860	910	1060	1170	1260	1340	1510	1620
Power Rating	MVA	499	547	596	630	734	811	873	928	1046	1122
Double Circuit (Fig 2)	Amps	610	660	710	760	870	950	1020	1080	1200	1290
Power Rating	MVA	423	457	492	527	603	658	707	748	831	894

[1]2500-6000 kcmil conductors are 5 segment Milliken conductors.
[2]Thicker sheath can accommodate more FAULT current.
[3]Based upon single point or cross bonding scheme.

345/400 kV XLPE Power Cable

SW STANDARD WALL XLPE LAMINATE SHEATH

CABLE CONSTRUCTION

- Concentric Stranded, Compact, or Segmental Copper or Alumimum Conductor
- Smooth Conductor Shield
- Super Clean XLPE Insulation
- True Triple Extrusion and Dry Cured
- Firmly Bonded Insulation Shield
- Copper or Aluminum screen wires/ laminate combination
- Polyethylene Jacket with Extruded Semi-Conductive Outer Layer

CABLE DATA	
Voltage Characteristics (kV)	
Max Voltage Rating	420
BIL Rating	1300/1425
Temperatures (°C)	
Nominal Conductor	90
Max. Emergency Conductor	105
Short Circuit Conductor	250
Minimum Installation	-10
Design Characteristics	
Design Standards	AEIC, IEC
Factory Test Voltages (@400 kV)	440 kV / 60 min.
XLPE Loss Factor	0.0005
Relative Permittivity	2.3

Conductor Size (kcmil[1])	Conductor Dia.	Insulation Thickness	Diameter Over Insulation	Overall Jacket Diameter	Min. Bending Radius (install / perm.)	Capacitance	Charging Current	CU Cond, CU Screen Wires, CU Laminate	AL Cond, CU Screen Wires, AL Laminate
								Cable Weight[2]	Cable Weight[2]
	(inches)	(mils)	(inches)	(inches)	(inches)	(pF/ft)	(A/kft)	(lbs/ft)	(lbs/ft)
1250	1.19	1260	3.88	4.61	83/56	38.37	3.37	10.81	8.32
1500	1.32	1181	3.85	4.57	83/55	42.75	3.72	11.37	8.34
1750	1.43	1142	3.88	4.61	83/56	45.73	3.98	12.14	8.59
2000	1.50	1142	3.95	4.69	85/57	47.32	4.12	13.08	8.96
2500	1.73	1063	4.05	4.79	87/58	54.58	4.75	14.66	9.51
3000	1.89	1063	4.28	5.03	91/61	59.13	5.15	16.66	10.46
3500	2.07	1063	4.38	5.15	93/62	61.24	5.33	18.42	11.16
4000	2.17	1063	4.48	5.25	95/63	63.19	5.50	20.14	11.83
5000	2.48	1063	4.79	5.59	101/68	69.32	6.04	24.54	13.38
6000	2.67	1063	4.99	5.79	105/70	73.13	6.37	27.30	14.78

Copper Conductor Size (kcmil[1]) Load Factor @ 75%											
Ampacity[3] @ 90°C; per Figures on Page 2		1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	920	1010	1090	1150	1370	1500	1600	1700	1880	2000
Power Rating	MVA	637	700	755	797	949	1039	1109	1178	1303	1386
Double Circuit (Fig 2)	Amps	770	840	900	950	1110	1220	1300	1370	1500	1590
Power Rating	MVA	533	582	624	658	769	845	901	949	1039	1102

Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%											
Ampacity[3] @ 90°C; per Figures on Page 2		1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	730	810	880	940	1100	1220	1320	1410	1610	1770
Power Rating	MVA	506	561	610	651	762	845	915	977	1115	1226
Double Circuit (Fig 2)	Amps	620	680	730	780	900	980	1060	1130	1290	1400
Power Rating	MVA	430	471	506	540	624	679	734	783	894	970

[1]2500-6000 kcmil conductors are 5 segment Milliken conductors.
[2]Weight based on screen sized at 279 kcmil which is calculated to accommodate 30 kA for 0.5 sec.
[3]Based upon single point or cross bonding scheme.