138 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	145
BIL Rating	650
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	160 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)
750	0.91	591	2.18	2.97	54/36	52.20	1.57	5.49	33.9	3.39	38.2
1000	1.06	591	2.35	3.17	58/39	58.10	1.75	6.56	36.2	3.88	40.8
1250	1.19	591	2.48	3.32	60/40	62.71	1.88	7.50	38.0	4.29	42.8
1500	1.32	591	2.61	3.47	63/42	67.33	2.02	8.49	39.7	4.72	44.8
1750	1.43	591	2.74	3.63	66/44	71.93	2.16	9.52	41.6	5.20	46.8
2000	1.50	591	2.81	3.72	68/45	74.89	2.25	10.43	42.7	5.50	47.9
2500	1.73	591	3.10	4.06	74/49	84.87	2.55	12.56	46.7	6.56	52.5
3000	1.89	591	3.33	4.33	78/52	92.86	2.79	14.50	49.8	7.43	56.0
3500	2.07	591	3.44	4.45	81/54	96.58	2.90	16.24	51.3	8.08	57.6
4000	2.17	591	3.54	4.57	83/55	100.01	3.00	17.95	52.6	8.71	59.1
5000	2.48	591	3.85	4.93	89/60	110.83	3.33	22.29	56.9	10.12	63.8
6000	2.67	591	4.04	5.16	93/62	117.58	3.53	25.04	59.5	11.46	66.7

Copper Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	750	860	960	1050	1110	1180	1420	1550	1650	1750	1860	1960
Power Rating	MVA	179	206	229	251	265	282	339	370	394	418	445	468
Double Circuit (Fig 2)	Amps	630	730	810	880	930	990	1170	1270	1350	1400	1490	1560
Power Rating	MVA	151	174	194	210	222	237	280	304	323	335	356	373

Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	590	690	770	850	920	980	1125	1240	1340	1430	1610	1740
Power Rating	MVA	141	165	184	203	220	234	269	296	320	342	385	416
Double Circuit (Fig 2)	Amps	500	580	650	710	770	810	930	1020	1100	1160	1300	1390
Power Rating	MVA	120	139	155	170	184	194	222	244	263	277	311	332

[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.

138 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	145
BIL Rating	650
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	160 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)
750	0.91	591	2.18	2.80	51/34	52.20	1.57	5.36	3.84
1000	1.06	591	2.35	2.97	54/36	58.10	1.75	6.33	4.28
1250	1.19	591	2.48	3.11	56/38	62.71	1.88	7.22	4.66
1500	1.32	591	2.61	3.24	59/39	67.33	2.02	8.15	5.06
1750	1.43	591	2.74	3.38	61/41	71.93	2.16	9.10	5.49
2000	1.50	591	2.81	3.47	63/42	74.89	2.25	9.99	5.83
2500	1.73	591	3.10	3.78	69/46	84.87	2.55	11.98	6.79
3000	1.89	591	3.33	4.02	73/49	92.86	2.79	13.82	7.59
3500	2.07	591	3.44	4.14	75/50	96.58	2.90	15.50	8.21
4000	2.17	591	3.54	4.24	77/51	100.01	3.00	17.17	8.82
5000	2.48	591	3.85	4.57	83/55	110.83	3.33	21.32	10.13
6000	2.67	591	4.04	4.78	87/58	117.58	3.53	23.98	11.41

Copper Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	760	880	980	1070	1150	1220	1470	1610	1730	1840	2030	2180
Power Rating	MVA	182	210	234	256	275	292	351	385	414	440	485	521
Double Circuit (Fig 2)	Amps	640	740	820	890	960	1010	1210	1320	1420	1500	1650	1760
Power Rating	MVA	153	177	196	213	229	241	289	316	339	359	394	421

Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000	6000
Single Circuit (Fig 1)	Amps	600	700	790	870	940	1000	1160	1290	1400	1500	1720	1890
Power Rating	MVA	143	167	189	208	225	239	277	308	335	359	411	452
Double Circuit (Fig 2)	Amps	500	590	660	720	780	830	960	1060	1150	1220	1400	1530
Power Rating	MVA	120	141	158	172	186	198	229	253	275	292	335	366

[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.