69 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	72.5
BIL Rating	350
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	80 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)
500	0.74	354	1.54	2.19	40/27	65.87	0.99	3.47	24.7	2.03	42.5
750	0.91	354	1.71	2.39	44/29	76.01	1.14	4.48	27.1	2.47	46.5
1000	1.06	354	1.88	2.59	47/32	85.60	1.29	5.48	29.4	2.90	50.3
1250	1.19	354	2.00	2.74	50/33	93.13	1.40	6.37	31.2	3.26	53.3
1500	1.32	354	2.13	2.89	52/35	100.69	1.51	7.32	32.9	3.65	56.3
1750	1.43	354	2.26	3.05	55/37	108.23	1.63	8.30	34.8	4.08	59.4
2000	1.50	345	2.35	3.14	57/38	113.10	1.70	9.18	35.9	4.39	61.0
2500	1.73	354	2.63	3.48	63/42	129.53	1.95	11.21	39.8	5.32	68.0
3000	1.89	354	2.79	3.67	67/45	138.63	2.08	12.98	42.0	6.00	71.6
3500	2.07	354	2.97	3.88	70/47	148.86	2.24	14.79	44.4	6.71	75.7
4000	2.17	354	3.07	3.98	72/48	154.54	2.32	16.45	45.8	7.31	77.9
5000	2.48	354	3.38	4.35	79/53	172.44	2.59	19.99	50.0	8.67	85.1

Copper Conductor Size (kcmil[1]) Load Factor @ 75%

Ampacity[3] @ 90°C; per Figures on Page 2		500	750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	600	750	870	970	1060	1130	1200	1420	1540	1630	1710	1870
Power Rating	MVA	72	90	104	116	127	135	143	170	184	195	204	223
Double Circuit (Fig 2)	Amps	520	640	740	820	890	950	1000	1200	1300	1380	1450	1570
Power Rating	MVA	62	76	88	98	106	114	120	143	155	165	173	188

Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%

Ampacity[3] @ 90°C; per Figures on Page 2		500	750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	470	590	690	780	860	920	990	1130	1250	1340	1430	1610
Power Rating	MVA	56	71	82	93	103	110	118	135	149	160	171	192
Double Circuit (Fig 2)	Amps	410	510	590	660	720	780	820	960	1050	1130	1200	1350
Power Rating	MVA	49	61	71	79	86	93	98	115	125	135	143	161

[1]2500–5000 kcmil conductors are 5 segment Milliken conductors.
[2]Thicker sheath can accommodate more FAULT current.
[3]Based upon single point or cross bonding scheme.

69 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	72.5
BIL Rating	350
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	80 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)
500	0.74	354	1.54	2.10	38/26	65.87	0.99	3.64	2.63
750	0.91	354	1.71	2.28	42/28	76.01	1.14	4.57	3.03
1000	1.06	354	1.88	2.46	45/30	85.60	1.29	5.50	3.43
1250	1.19	354	2.00	2.60	47/32	93.13	1.40	6.33	3.77
1500	1.32	354	2.13	2.74	50/33	100.69	1.51	7.22	4.12
1750	1.43	354	2.26	2.88	52/35	108.23	1.63	8.13	4.51
2000	1.50	345	2.35	2.97	54/36	113.10	1.70	8.98	4.82
2500	1.73	354	2.63	3.28	59/40	129.53	1.95	10.88	5.68
3000	1.89	354	2.79	3.44	62/42	138.63	2.08	12.65	6.40
3500	2.07	354	2.97	3.63	66/44	148.86	2.24	14.30	6.98
4000	2.17	354	3.07	3.73	68/45	154.54	2.32	15.90	7.54
5000	2.48	354	3.38	4.07	74/49	172.44	2.59	20.00	8.77

Copper Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		500	750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	620	770	900	1010	1100	1180	1250	1470	1610	1730	1840	2030
Power Rating	MVA	74	92	108	121	131	141	149	176	192	207	220	243
Double Circuit (Fig 2)	Amps	520	640	740	830	900	960	1010	1240	1350	1450	1520	1680
Power Rating	MVA	62	76	88	99	108	115	121	148	161	173	182	201
Aluminum Conductor Size (kcmil[1]) Load Factor @ 75%													
Ampacity[3] @ 90°C; per Figures on Page 2		500	750	1000	1250	1500	1750	2000	2500	3000	3500	4000	5000
Single Circuit (Fig 1)	Amps	490	610	710	800	880	960	1020	1160	1290	1400	1500	1720
Power Rating	MVA	59	73	85	96	105	115	122	139	154	167	179	206
Double Circuit (Fig 2)	Amps	410	510	590	660	720	780	830	920	1080	1170	1250	1430
Power Rating	MVA	49	61	71	79	86	93	99	110	129	140	149	171

[1]2500–5000 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.