138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

in Underground Duct Bank - 1 Circuit - Three Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0033 pf & Rho 60	90	120
85°C - Copper Conductor - Hollow Core Concentric Strand										
750	Open	783	731	733	669	689	618	4.2	5.1	5.9
1000	Open	922	857	858	780	804	718	4.8	5.8	6.8
1250	Open	1041	966	967	876	904	804	4.9	6.0	7.1
1500	Open	1147	1063	1063	961	992	880	5.1	6.3	7.4
1750	Open	1244	1150	1150	1037	1070	948	5.3	6.5	7.7
2000	Open	1326	1223	1223	1101	1137	1005	5.4	6.7	7.9
2250	Open	1404	1293	1292	1161	1199	1058	5.6	6.9	8.2
85°C - Copper Conductor - Hollow Core Segmental Strand										
2000	Open	1344	1241	1241	1117	1153	1020	5.4	6.7	7.9
2250	Open	1427	1315	1314	1181	1219	1075	5.6	6.9	8.2
2500	Open	1506	1385	1384	1242	1282	1130	5.7	7.0	8.4
2750	Open	1580	1453	1451	1300	1342	1180	5.8	7.2	8.6
3000	Open	1641	1508	1506	1347	1391	1222	5.9	7.3	8.8

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2318

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable in Underground Duct Bank - 1 Circuit - Three Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	35.3	31.1	31.2	26.4	27.9	22.9
1000	Open	37.2	32.6	32.6	27.5	29.0	23.7
1250	Open	38.4	33.5	33.6	28.1	29.8	24.2
1500	Open	39.6	34.4	34.4	28.7	30.4	24.6
1750	Open	40.7	35.3	35.3	29.4	31.0	25.1
2000	Open	41.4	35.8	35.8	29.7	31.4	25.3
2250	Open	42.4	36.5	36.5	30.2	31.9	25.7
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	41.3	35.8	35.8	29.7	31.4	25.3
2250	Open	42.4	36.6	36.5	30.2	31.9	25.7
2500	Open	43.1	37.0	37.0	30.5	32.3	25.9
2750	Open	43.8	37.7	37.6	31.0	32.7	26.2
3000	Open	44.4	38.2	38.1	31.3	33.1	26.5

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

in Underground Duct Bank - 1 Circuit - Three Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	OD	Duct ID	Wd	Rac	Qs	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	2.791	5.06	0.84	17.78	1.002	1.70	0.21	1.48	0.24	2.11	3.30
1000	Open	2.823	5.06	0.97	13.41	1.002	1.47	0.21	1.45	0.24	2.11	3.30
1250	Open	2.940	5.06	1.04	10.83	1.003	1.38	0.20	1.39	0.24	2.11	3.30
1500	Open	3.058	5.06	1.10	9.14	1.005	1.30	0.20	1.34	0.24	2.11	3.30
1750	Open	3.175	5.06	1.16	7.97	1.006	1.23	0.19	1.29	0.24	2.11	3.30
2000	Open	3.286	5.06	1.20	7.11	1.007	1.19	0.21	1.25	0.24	2.11	3.30
2250	Open	3.396	5.06	1.26	6.46	1.009	1.14	0.20	1.20	0.24	2.11	3.30
					85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	3.283	5.06	1.19	6.90	1.008	1.19	0.21	1.25	0.24	2.11	3.30
2250	Open	3.396	5.06	1.26	6.25	1.009	1.14	0.20	1.20	0.24	2.11	3.30
2500	Open	3.475	5.06	1.29	5.69	1.017	1.10	0.20	1.18	0.24	2.09	3.30
2750	Open	3.570	5.06	1.34	5.23	1.020	1.06	0.19	1.15	0.24	2.09	3.30
3000	Open	3.651	5.06	1.38	4.89	1.023	1.03	0.19	1.12	0.24	2.09	3.30

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2320

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

in Underground Duct Bank - 2 Circuits - Six Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF	delta Td for .0033 pf & Rho 60	90	120
85°C - Copper Conductor - Hollow Core Concentric Strand										
750	Open	697	627	623	546	564	485	5.8	7.6	9.4
1000	Open	814	730	722	629	650	557	6.6	8.7	10.8
1250	Open	915	817	809	703	725	620	6.9	9.1	11.4
1500	Open	1005	895	884	767	791	674	7.2	9.5	11.9
1750	Open	1085	964	951	823	848	721	7.5	10.0	12.5
2000	Open	1153	1023	1008	871	897	762	7.7	10.3	12.9
2250	Open	1216	1076	1059	914	941	797	8.0	10.7	13.4
85°C - Copper Conductor - Hollow Core Segmental Strand										
2000	Open	1169	1037	1023	884	910	773	7.7	10.3	12.8
2250	Open	1236	1094	1077	929	956	811	8.0	10.7	13.4
2500	Open	1301	1150	1131	974	1002	848	8.1	10.9	13.7
2750	Open	1362	1203	1181	1015	1043	882	8.4	11.3	14.2
3000	Open	1412	1245	1221	1049	1077	910	8.6	11.5	14.5

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

in Underground Duct Bank - 2 Circuits - Six Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	56.9	47.0	46.5	36.9	39.0	30.2
1000	Open	59.3	48.8	47.9	37.8	39.9	30.9
1250	Open	60.8	49.8	48.9	38.5	40.5	31.3
1500	Open	62.3	50.7	49.7	39.0	41.1	31.6
1750	Open	63.7	51.7	50.5	39.6	41.6	32.0
2000	Open	64.4	52.2	50.9	39.8	41.8	32.2
2250	Open	65.5	52.9	51.5	40.3	42.2	32.4
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	64.3	52.1	50.9	39.8	41.8	32.1
2250	Open	65.5	52.9	51.5	40.3	42.2	32.5
2500	Open	66.3	53.5	52.0	40.6	42.5	32.6
2750	Open	67.2	54.2	52.6	40.9	42.8	32.9
3000	Open	68.0	54.7	52.9	41.2	43.0	33.1

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2322

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

in Underground Duct Bank - 2 Circuits - Six Cables - 12 in Spacing

25°C Earth Ambient

Condr Size	Sheath Res	OD	Duct ID	Wd	Rac	Qs	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	2.791	5.06	0.84	17.78	1.002	1.70	0.21	1.43	0.24	4.00	6.34
1000	Open	2.823	5.06	0.97	13.41	1.002	1.47	0.21	1.40	0.24	4.00	6.34
1250	Open	2.940	5.06	1.04	10.83	1.004	1.38	0.20	1.35	0.24	4.00	6.34
1500	Open	3.058	5.06	1.10	9.14	1.005	1.30	0.20	1.29	0.24	4.00	6.34
1750	Open	3.175	5.06	1.16	7.97	1.006	1.23	0.19	1.25	0.24	4.00	6.34
2000	Open	3.286	5.06	1.20	7.11	1.008	1.19	0.21	1.20	0.24	4.00	6.34
2250	Open	3.396	5.06	1.26	6.46	1.010	1.14	0.20	1.16	0.24	4.00	6.34
					85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	3.283	5.06	1.19	6.90	1.008	1.19	0.21	1.21	0.24	4.00	6.34
2250	Open	3.396	5.06	1.26	6.25	1.010	1.14	0.20	1.16	0.24	4.00	6.34
2500	Open	3.475	5.06	1.29	5.69	1.013	1.10	0.20	1.14	0.24	4.00	6.34
2750	Open	3.570	5.06	1.34	5.23	1.015	1.06	0.19	1.11	0.24	4.00	6.34
3000	Open	3.651	5.06	1.38	4.89	1.018	1.03	0.19	1.08	0.24	4.00	6.34

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						75% LF							
						85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	953	54	23.3	855	60	19.0	780	64	16.0	2.9	3.8	4.8
1000	Open	1132	56	24.8	1008	62	19.9	915	66	16.6	3.2	4.4	5.5
1250	Open	1280	57	24.6	1136	63	19.6	1028	67	16.4	3.4	4.6	5.8
1500	Open	1412	58	24.4	1249	64	19.4	1128	68	16.1	3.5	4.8	6.0
1750	Open	1532	58	24.2	1351	64	19.1	1218	68	15.9	3.6	5.0	6.3
2000	Open	1628	59	23.7	1435	65	18.7	1293	68	15.5	3.7	5.1	6.5
2250	Open	1725	59	23.5	1517	65	18.6	1364	69	15.3	3.9	5.3	6.8
						85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1651	59	23.7	1456	65	18.7	1311	68	15.5	3.7	5.1	6.5
2250	Open	1754	59	23.5	1542	65	18.6	1386	69	15.3	3.9	5.3	6.8
2500	Open	1850	60	23.4	1624	66	18.4	1458	69	15.1	3.9	5.4	6.9
2750	Open	1944	60	23.3	1703	66	18.2	1527	70	15.0	4.0	5.6	7.1
3000	Open	2020	61	23.2	1767	66	18.1	1582	70	14.8	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale

2324

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	865	60	19.4	759	65	15.2	682	69	12.5	2.9	3.8	4.8
1000	Open	1022	62	20.4	890	67	15.8	795	71	12.9	3.2	4.4	5.5
1250	Open	1151	62	20.1	999	68	15.5	890	71	12.6	3.4	4.6	5.8
1500	Open	1266	63	19.9	1095	69	15.2	974	72	12.4	3.5	4.8	6.0
1750	Open	1369	64	19.6	1181	69	15.0	1049	73	12.2	3.6	5.0	6.3
2000	Open	1454	64	19.2	1253	69	14.6	1112	73	11.7	3.7	5.1	6.5
2250	Open	1536	65	19.0	1321	70	14.4	1170	73	11.6	3.9	5.3	6.8
						85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1475	64	19.2	1271	69	14.7	1128	73	11.8	3.7	5.1	6.5
2250	Open	1562	65	19.0	1343	70	14.4	1189	73	11.6	3.9	5.3	6.8
2500	Open	1645	65	18.8	1412	70	14.3	1249	73	11.4	3.9	5.4	6.9
2750	Open	1724	65	18.6	1477	71	14.1	1305	74	11.3	4.0	5.6	7.1
3000	Open	1789	66	18.5	1530	71	13.9	1350	74	11.2	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						75% LF							
						75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	879	50	19.4	787	55	15.9	717	58	13.3	2.9	3.8	4.8
1000	Open	1044	51	20.6	927	56	16.5	839	60	13.8	3.2	4.4	5.5
1250	Open	1179	52	20.5	1044	57	16.4	943	60	13.6	3.4	4.6	5.8
1500	Open	1300	53	20.4	1147	58	16.1	1034	61	13.4	3.5	4.8	6.0
1750	Open	1409	53	20.2	1240	58	16.0	1114	61	13.1	3.6	5.0	6.3
2000	Open	1497	53	19.8	1316	58	15.6	1182	62	12.8	3.7	5.1	6.5
2250	Open	1585	54	19.6	1389	59	15.4	1245	62	12.7	3.9	5.3	6.8
						75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1519	53	19.8	1335	58	15.6	1199	62	12.8	3.7	5.1	6.5
2250	Open	1612	54	19.7	1413	59	15.4	1267	62	12.7	3.9	5.3	6.8
2500	Open	1700	54	19.6	1488	59	15.3	1332	62	12.5	3.9	5.4	6.9
2750	Open	1785	55	19.5	1559	60	15.2	1393	63	12.4	4.0	5.6	7.1
3000	Open	1854	55	19.4	1616	60	15.1	1443	63	12.2	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2326

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Interface Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Interface Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	798	54	16.3	699	59	12.7	627	62	10.4	2.9	3.8	4.8
1000	Open	942	56	17.0	818	60	13.1	729	63	10.7	3.2	4.4	5.5
1250	Open	1061	56	16.9	918	61	13.0	817	64	10.5	3.4	4.6	5.8
1500	Open	1166	57	16.6	1006	62	12.7	893	64	10.4	3.5	4.8	6.0
1750	Open	1260	58	16.4	1084	62	12.5	960	65	10.1	3.6	5.0	6.3
2000	Open	1337	58	16.0	1149	62	12.2	1016	65	9.9	3.7	5.1	6.5
2250	Open	1411	58	15.9	1210	63	12.0	1068	65	9.7	3.9	5.3	6.8
						75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1357	58	16.1	1166	62	12.2	1032	65	9.9	3.7	5.1	6.5
2250	Open	1436	58	15.9	1231	63	12.0	1087	65	9.7	3.9	5.3	6.8
2500	Open	1511	59	15.7	1294	63	11.9	1141	66	9.6	3.9	5.4	6.9
2750	Open	1584	59	15.6	1353	63	11.8	1191	66	9.4	4.0	5.6	7.1
3000	Open	1642	59	15.5	1400	64	11.6	1231	66	9.3	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp	60 Rho Flux	60 Rho Amps	90 Rho Interface Temp	90 Rho Flux	90 Rho Amps	120 Rho Interface Temp	120 Rho Flux	120 Rho Amps	delta Td for .0033 pf & Rho 60	90	120
		°C	w/ft²		°C	w/ft²		°C	w/ft²				
						75% LF							
						65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	45	15.6	793	49	12.6	643	52	10.7		2.9	3.8	4.8
1000	Open	46	16.5	941	50	13.3	751	53	11.0		3.2	4.4	5.5
1250	Open	47	16.4	1062	51	13.0	842	54	10.8		3.4	4.6	5.8
1500	Open	47	16.2	1169	51	12.9	922	54	10.6		3.5	4.8	6.0
1750	Open	48	16.1	1267	52	12.8	993	55	10.5		3.6	5.0	6.3
2000	Open	48	15.8	1344	52	12.4	1052	55	10.2		3.7	5.1	6.5
2250	Open	48	15.6	1422	52	12.3	1107	55	10.0		3.9	5.3	6.8
						65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	48	15.8	1365	52	12.4	1068	55	10.2		3.7	5.1	6.5
2250	Open	48	15.7	1448	52	12.3	1127	55	10.1		3.9	5.3	6.8
2500	Open	49	15.6	1525	53	12.2	1184	55	10.0		3.9	5.4	6.9
2750	Open	49	15.5	1601	53	12.1	1237	56	9.8		4.0	5.6	7.1
3000	Open	49	15.5	1662	53	12.0	1280	56	9.7		4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2328

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	720	48	13.0	629	52	10.3	562	55	8.3	2.9	3.8	4.8
1000	Open	849	50	13.7	735	54	10.6	653	56	8.7	3.2	4.4	5.5
1250	Open	955	50	13.5	824	54	10.4	730	56	8.4	3.4	4.6	5.8
1500	Open	1048	51	13.4	901	55	10.2	797	57	8.2	3.5	4.8	6.0
1750	Open	1132	51	13.2	970	55	10.1	855	57	8.1	3.6	5.0	6.3
2000	Open	1200	51	12.9	1027	55	9.8	905	57	7.9	3.7	5.1	6.5
2250	Open	1266	52	12.7	1080	55	9.7	949	58	7.8	3.9	5.3	6.8
						65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1219	51	12.9	1043	55	9.8	919	57	7.9	3.7	5.1	6.5
2250	Open	1289	52	12.7	1100	55	9.7	967	58	7.8	3.9	5.3	6.8
2500	Open	1356	52	12.6	1155	56	9.6	1014	58	7.7	3.9	5.4	6.9
2750	Open	1420	53	12.5	1207	56	9.4	1057	58	7.6	4.0	5.6	7.1
3000	Open	1472	53	12.4	1248	56	9.3	1092	58	7.5	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp	60 Rho Amps	60 Rho Flux °C w/ft²	90 Rho Interface Temp	90 Rho Amps	90 Rho Flux °C w/ft²	120 Rho Interface Temp	120 Rho Amps	120 Rho Flux °C w/ft²	delta Td for .0033 pf & Rho 60	90	120
						75% LF							
						50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	628	38	9.7	555	41	7.9	499	42	6.6	2.9	3.8	4.8
1000	Open	742	39	10.3	649	42	8.3	579	43	6.8	3.2	4.4	5.5
1250	Open	836	39	10.3	728	42	8.1	647	44	6.6	3.4	4.6	5.8
1500	Open	919	40	10.1	798	42	8.0	706	44	6.5	3.5	4.8	6.0
1750	Open	993	40	10.1	858	43	7.8	756	44	6.4	3.6	5.0	6.3
2000	Open	1052	40	9.9	908	43	7.7	799	44	6.3	3.7	5.1	6.5
2250	Open	1110	40	9.8	954	43	7.5	837	45	6.2	3.9	5.3	6.8
						50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1070	40	9.9	923	43	7.7	812	44	6.3	3.7	5.1	6.5
2250	Open	1132	40	9.8	973	43	7.6	854	45	6.2	3.9	5.3	6.8
2500	Open	1191	41	9.7	1022	43	7.5	894	45	6.0	3.9	5.4	6.9
2750	Open	1248	41	9.6	1067	43	7.5	931	45	6.0	4.0	5.6	7.1
3000	Open	1294	41	9.6	1103	43	7.4	961	45	6.0	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2330

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp Amps	60 Rho Interface Temp °C	60 Rho Interface Flux w/ft²	90 Rho Interface Temp Amps	90 Rho Interface Temp °C	90 Rho Interface Flux w/ft²	120 Rho Interface Temp Amps	120 Rho Interface Temp °C	120 Rho Interface Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	570	40	8.2	493	43	6.4	437	44	5.3	2.9	3.8	4.8
1000	Open	670	41	8.7	573	43	6.6	503	45	5.4	3.2	4.4	5.5
1250	Open	752	41	8.6	641	44	6.6	560	45	5.3	3.4	4.6	5.8
1500	Open	824	42	8.4	699	44	6.5	609	45	5.2	3.5	4.8	6.0
1750	Open	888	42	8.3	750	44	6.4	651	46	5.2	3.6	5.0	6.3
2000	Open	939	42	8.1	793	44	6.2	687	46	5.0	3.7	5.1	6.5
2250	Open	989	42	8.1	831	45	6.1	718	46	4.9	3.9	5.3	6.8
						50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	955	42	8.1	806	44	6.2	699	46	5.0	3.7	5.1	6.5
2250	Open	1009	42	8.1	848	45	6.1	733	46	4.9	3.9	5.3	6.8
2500	Open	1059	43	8.0	888	45	6.0	766	46	4.8	3.9	5.4	6.9
2750	Open	1107	43	7.9	926	45	6.0	796	46	4.8	4.0	5.6	7.1
3000	Open	1146	43	7.8	956	45	5.9	820	46	4.7	4.1	5.7	7.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	51.0	42.5	41.6	33.3	35.0	27.4
1000	Open	54.6	45.1	43.9	34.9	36.7	28.4
1250	Open	56.5	46.3	45.2	35.7	37.6	28.9
1500	Open	58.3	47.5	46.3	36.4	38.4	29.5
1750	Open	60.1	48.7	47.5	37.1	39.2	30.0
2000	Open	60.7	49.1	47.9	37.4	39.6	30.2
2250	Open	62.1	50.1	48.9	38.0	40.3	30.6
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	60.6	49.1	47.9	37.4	39.5	30.2
2250	Open	62.2	50.1	48.9	38.0	40.2	30.6
2500	Open	63.1	50.7	49.5	38.4	40.7	30.9
2750	Open	64.4	51.5	50.3	38.9	41.3	31.2
3000	Open	65.3	52.1	50.9	39.2	41.7	31.5

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	42.5	35.5	34.6	27.8	29.1	22.9
1000	Open	45.6	37.6	36.5	29.1	30.5	23.7
1250	Open	47.1	38.7	37.6	29.8	31.3	24.2
1500	Open	48.5	39.7	38.5	30.4	31.9	24.6
1750	Open	50.0	40.7	39.5	31.0	32.5	25.1
2000	Open	50.5	41.0	39.8	31.2	32.8	25.2
2250	Open	51.7	41.8	40.6	31.7	33.4	25.5
75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	50.4	41.0	39.8	31.2	32.8	25.2
2250	Open	51.7	41.8	40.6	31.7	33.4	25.6
2500	Open	52.6	42.4	41.2	32.1	33.8	25.8
2750	Open	53.6	43.1	41.8	32.5	34.2	26.1
3000	Open	54.3	43.5	42.3	32.8	34.6	26.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	34.0	28.5	27.6	22.3	23.2	18.3
1000	Open	36.5	30.2	29.2	23.4	24.3	19.1
1250	Open	37.7	31.1	30.0	23.9	24.9	19.5
1500	Open	38.8	31.8	30.7	24.4	25.4	19.8
1750	Open	40.0	32.6	31.5	24.9	25.9	20.1
2000	Open	40.4	32.9	31.7	25.1	26.1	20.3
2250	Open	41.4	33.6	32.4	25.4	26.5	20.5
65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	40.3	32.9	31.7	25.0	26.1	20.2
2250	Open	41.4	33.6	32.4	25.5	26.5	20.5
2500	Open	42.0	34.0	32.8	25.7	26.8	20.7
2750	Open	42.8	34.5	33.3	26.1	27.2	20.9
3000	Open	43.4	34.9	33.7	26.3	27.4	21.1

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	21.3	18.0	17.2	14.1	14.4	11.6
1000	Open	22.8	19.1	18.1	14.8	15.0	12.0
1250	Open	23.5	19.6	18.6	15.1	15.3	12.3
1500	Open	24.2	20.1	19.1	15.4	15.6	12.5
1750	Open	24.9	20.6	19.5	15.7	15.9	12.7
2000	Open	25.2	20.8	19.7	15.9	16.0	12.8
2250	Open	25.8	21.2	20.0	16.1	16.3	13.0
50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	25.1	20.8	19.6	15.8	16.0	12.8
2250	Open	25.7	21.2	20.0	16.1	16.3	13.0
2500	Open	26.1	21.5	20.3	16.2	16.4	13.1
2750	Open	26.6	21.8	20.6	16.5	16.6	13.2
3000	Open	27.0	22.1	20.8	16.6	16.8	13.3

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
			85°C - Copper Conductor - Hollow Core Concentric Strand						
750	Open	2.791	0.84	17.78	1.003	1.70	0.21	2.39	3.55
1000	Open	2.823	0.97	13.41	1.004	1.47	0.21	2.39	3.54
1250	Open	2.940	1.04	10.83	1.006	1.38	0.20	2.37	3.52
1500	Open	3.058	1.10	9.14	1.008	1.30	0.20	2.35	3.51
1750	Open	3.175	1.16	7.97	1.010	1.23	0.19	2.33	3.49
2000	Open	3.286	1.20	7.11	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.46	1.016	1.14	0.20	2.30	3.46
			85°C - Copper Conductor - Hollow Core Segmental Strand						
2000	Open	3.283	1.19	6.90	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.25	1.017	1.14	0.20	2.30	3.46
2500	Open	3.475	1.29	5.69	1.020	1.10	0.20	2.29	3.45
2750	Open	3.570	1.34	5.23	1.024	1.06	0.19	2.28	3.43
3000	Open	3.651	1.38	4.89	1.028	1.03	0.19	2.27	3.42

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
			75°C - Copper Conductor - Hollow Core Concentric Strand						
750	Open	2.791	0.84	17.78	1.003	1.70	0.21	2.39	3.55
1000	Open	2.823	0.97	13.41	1.004	1.47	0.21	2.39	3.54
1250	Open	2.940	1.04	10.83	1.006	1.38	0.20	2.37	3.52
1500	Open	3.058	1.10	9.14	1.008	1.30	0.20	2.35	3.51
1750	Open	3.175	1.16	7.97	1.010	1.23	0.19	2.33	3.49
2000	Open	3.286	1.20	7.11	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.46	1.016	1.14	0.20	2.30	3.46
			75°C - Copper Conductor - Hollow Core Segmental Strand						
2000	Open	3.283	1.19	6.90	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.25	1.017	1.14	0.20	2.30	3.46
2500	Open	3.475	1.29	5.69	1.020	1.10	0.20	2.29	3.45
2750	Open	3.570	1.34	5.23	1.024	1.06	0.19	2.28	3.43
3000	Open	3.651	1.38	4.89	1.028	1.03	0.19	2.27	3.42

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
65°C - Copper Conductor - Hollow Core Concentric Strand									
750	Open	2.791	0.84	17.78	1.003	1.70	0.21	2.39	3.55
1000	Open	2.823	0.97	13.41	1.004	1.47	0.21	2.39	3.54
1250	Open	2.940	1.04	10.83	1.006	1.38	0.20	2.37	3.52
1500	Open	3.058	1.10	9.14	1.008	1.30	0.20	2.35	3.51
1750	Open	3.175	1.16	7.97	1.010	1.23	0.19	2.33	3.49
2000	Open	3.286	1.20	7.11	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.46	1.016	1.14	0.20	2.30	3.46
65°C - Copper Conductor - Hollow Core Segmental Strand									
2000	Open	3.283	1.19	6.90	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.25	1.017	1.14	0.20	2.30	3.46
2500	Open	3.475	1.29	5.69	1.020	1.10	0.20	2.29	3.45
2750	Open	3.570	1.34	5.23	1.024	1.06	0.19	2.28	3.43
3000	Open	3.651	1.38	4.89	1.028	1.03	0.19	2.27	3.42

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2338

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 1 Circuit - Three Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
50°C - Copper Conductor - Hollow Core Concentric Strand									
750	Open	2.791	0.84	17.78	1.003	1.70	0.21	2.39	3.55
1000	Open	2.823	0.97	13.41	1.004	1.47	0.21	2.39	3.54
1250	Open	2.940	1.04	10.83	1.006	1.38	0.20	2.37	3.52
1500	Open	3.058	1.10	9.14	1.008	1.30	0.20	2.35	3.51
1750	Open	3.175	1.16	7.97	1.010	1.23	0.19	2.33	3.49
2000	Open	3.286	1.20	7.11	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.46	1.016	1.14	0.20	2.30	3.46
50°C - Copper Conductor - Hollow Core Segmental Strand									
2000	Open	3.283	1.19	6.90	1.013	1.19	0.21	2.32	3.47
2250	Open	3.396	1.26	6.25	1.017	1.14	0.20	2.30	3.46
2500	Open	3.475	1.29	5.69	1.020	1.10	0.20	2.29	3.45
2750	Open	3.570	1.34	5.23	1.024	1.06	0.19	2.28	3.43
3000	Open	3.651	1.38	4.89	1.028	1.03	0.19	2.27	3.42

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp	60 Rho Flux	60 Rho Amps	90 Rho Interface Temp	90 Rho Flux	90 Rho Amps	120 Rho Interface Temp	120 Rho Flux	120 Rho Amps	delta Td for .0033 pf & Rho 60	90	120
		°C	w/ft²		°C	w/ft²		°C	w/ft²				
					75% LF								
		85°C - Copper Conductor - Hollow Core Concentric Strand											
750	Open	57	21.1	903	63	16.8	799	67	14.0	723	3.4	4.6	5.8
1000	Open	59	22.2	1069	65	17.5	939	69	14.3	843	3.8	5.2	6.7
1250	Open	60	22.0	1205	66	17.1	1055	70	14.0	946	4.0	5.5	7.0
1500	Open	61	21.7	1327	67	16.9	1158	70	13.7	1036	4.1	5.7	7.3
1750	Open	62	21.5	1437	67	16.6	1250	71	13.5	1116	4.3	6.0	7.7
2000	Open	62	21.0	1527	68	16.3	1327	71	13.1	1183	4.4	6.2	7.9
2250	Open	62	20.8	1614	68	16.1	1400	72	12.9	1245	4.6	6.4	8.2
		85°C - Copper Conductor - Hollow Core Segmental Strand											
2000	Open	62	21.1	1549	68	16.3	1346	71	13.1	1199	4.4	6.2	7.9
2250	Open	62	20.9	1642	68	16.1	1423	72	12.9	1266	4.6	6.4	8.2
2500	Open	63	20.8	1730	68	15.9	1496	72	12.9	1329	4.7	6.5	8.4
2750	Open	63	20.7	1815	69	15.7	1567	72	12.6	1389	4.8	6.7	8.7
3000	Open	64	20.5	1883	69	15.6	1624	73	12.6	1438	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale

2340

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	807	63	17.1	699	68	13.1	623	72	10.7	3.4	4.6	5.8
1000	Open	949	65	17.7	816	70	13.5	722	73	10.8	3.8	5.2	6.7
1250	Open	1067	66	17.5	914	71	13.3	808	74	10.7	4.0	5.5	7.0
1500	Open	1171	66	17.2	1001	71	13.0	882	74	10.4	4.1	5.7	7.3
1750	Open	1265	67	17.0	1077	72	12.8	947	75	10.1	4.3	6.0	7.7
2000	Open	1342	67	16.6	1141	72	12.4	1003	75	9.9	4.4	6.2	7.9
2250	Open	1416	68	16.4	1201	73	12.1	1053	75	9.7	4.6	6.4	8.2
						85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1361	67	16.6	1158	72	12.3	1018	75	9.9	4.4	6.2	7.9
2250	Open	1439	68	16.4	1221	73	12.1	1071	75	9.7	4.6	6.4	8.2
2500	Open	1514	68	16.3	1283	73	12.1	1124	76	9.6	4.7	6.5	8.4
2750	Open	1585	69	16.0	1341	73	11.9	1173	76	9.4	4.8	6.7	8.7
3000	Open	1643	69	15.9	1387	74	11.7	1212	76	9.3	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	---- 60 Rho--- Amps	Interface Temp °C	Flux w/ft²	---- 90 Rho--- Amps	Interface Temp °C	Flux w/ft²	----120 Rho--- Amps	Interface Temp °C	Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						75% LF							
						75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	832	52	17.5	735	57	14.0	663	61	11.5	3.4	4.6	5.8
1000	Open	984	54	18.5	862	59	14.5	772	62	11.9	3.8	5.2	6.7
1250	Open	1109	55	18.3	968	59	14.3	865	63	11.7	4.0	5.5	7.0
1500	Open	1221	55	18.1	1062	60	14.0	946	63	11.4	4.1	5.7	7.3
1750	Open	1321	56	17.9	1145	61	13.8	1018	64	11.2	4.3	6.0	7.7
2000	Open	1402	56	17.6	1214	61	13.5	1078	64	10.9	4.4	6.2	7.9
2250	Open	1482	57	17.4	1280	61	13.3	1133	64	10.8	4.6	6.4	8.2
						75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1423	56	17.6	1232	61	13.5	1094	64	10.9	4.4	6.2	7.9
2250	Open	1507	57	17.4	1302	61	13.4	1153	64	10.8	4.6	6.4	8.2
2500	Open	1587	57	17.3	1368	62	13.2	1210	64	10.7	4.7	6.5	8.4
2750	Open	1664	57	17.1	1431	62	13.1	1263	65	10.5	4.8	6.7	8.7
3000	Open	1726	58	17.1	1482	62	13.0	1306	65	10.4	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp	60 Rho Flux	60 Rho Amps	90 Rho Interface Temp	90 Rho Flux	90 Rho Amps	120 Rho Interface Temp	120 Rho Flux	120 Rho Amps	delta Td for .0033 pf & Rho 60	90	120
		°C	w/ft²	Amps	°C	w/ft²	Amps	°C	w/ft²	Amps			
						100% LF							
						75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	57	14.2	744	61	10.9	643	64	8.9	571	3.4	4.6	5.8
1000	Open	58	14.9	874	63	11.2	749	65	9.1	661	3.8	5.2	6.7
1250	Open	59	14.7	982	63	11.0	838	66	8.8	738	4.0	5.5	7.0
1500	Open	60	14.4	1077	64	10.9	917	66	8.6	805	4.1	5.7	7.3
1750	Open	60	14.2	1162	64	10.6	986	67	8.4	864	4.3	6.0	7.7
2000	Open	60	13.8	1232	65	10.3	1044	67	8.3	914	4.4	6.2	7.9
2250	Open	61	13.7	1299	65	10.2	1098	67	8.1	959	4.6	6.4	8.2
						75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	60	13.8	1251	64	10.4	1060	67	8.3	928	4.4	6.2	7.9
2250	Open	61	13.7	1322	65	10.2	1117	67	8.1	976	4.6	6.4	8.2
2500	Open	61	13.5	1389	65	10.1	1172	68	8.0	1023	4.7	6.5	8.4
2750	Open	62	13.4	1454	65	10.0	1224	68	7.9	1066	4.8	6.7	8.7
3000	Open	62	13.3	1505	66	9.8	1265	68	7.7	1101	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp	60 Rho Flux	60 Rho Amps	90 Rho Interface Temp	90 Rho Flux	90 Rho Amps	120 Rho Interface Temp	120 Rho Flux	120 Rho Amps	delta Td for .0033 pf & Rho 60	90	120
		°C	w/ft²	Amps	°C	w/ft²	Amps	°C	w/ft²	Amps			
						75% LF							
						65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	47	14.1	750	51	11.1	660	54	9.2	593	3.4	4.6	5.8
1000	Open	48	14.7	885	52	11.5	772	55	9.5	688	3.8	5.2	6.7
1250	Open	49	14.7	997	53	11.4	866	56	9.2	769	4.0	5.5	7.0
1500	Open	50	14.5	1096	53	11.1	948	56	9.1	840	4.1	5.7	7.3
1750	Open	50	14.3	1185	54	11.1	1021	56	8.9	902	4.3	6.0	7.7
2000	Open	50	14.1	1256	54	10.7	1082	56	8.7	954	4.4	6.2	7.9
2250	Open	51	13.8	1326	54	10.6	1139	57	8.5	1002	4.6	6.4	8.2
						65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	50	14.0	1276	54	10.7	1099	56	8.7	970	4.4	6.2	7.9
2250	Open	51	13.8	1350	54	10.6	1160	57	8.5	1020	4.6	6.4	8.2
2500	Open	51	13.7	1421	55	10.6	1217	57	8.5	1070	4.7	6.5	8.4
2750	Open	51	13.7	1488	55	10.4	1272	57	8.3	1115	4.8	6.7	8.7
3000	Open	52	13.6	1542	55	10.3	1315	58	8.3	1152	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	671	51	11.5	577	54	8.8	511	57	7.1	3.4	4.6	5.8
1000	Open	787	52	11.9	671	56	9.1	590	58	7.3	3.8	5.2	6.7
1250	Open	883	52	11.8	750	56	8.8	658	58	7.1	4.0	5.5	7.0
1500	Open	967	53	11.6	820	56	8.7	716	58	7.0	4.1	5.7	7.3
1750	Open	1042	53	11.4	879	57	8.5	767	59	6.9	4.3	6.0	7.7
2000	Open	1104	54	11.2	930	57	8.3	811	59	6.6	4.4	6.2	7.9
2250	Open	1162	54	11.0	977	57	8.2	848	59	6.5	4.6	6.4	8.2
						65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1121	54	11.2	945	57	8.3	824	59	6.6	4.4	6.2	7.9
2250	Open	1184	54	11.0	995	57	8.2	863	59	6.5	4.6	6.4	8.2
2500	Open	1244	54	10.9	1043	57	8.1	904	59	6.4	4.7	6.5	8.4
2750	Open	1300	55	10.8	1088	58	8.0	941	60	6.3	4.8	6.7	8.7
3000	Open	1345	55	10.7	1123	58	7.8	970	60	6.3	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp Amps	60 Rho Interface Temp °C	60 Rho Flux w/ft²	90 Rho Interface Temp Amps	90 Rho Interface Temp °C	90 Rho Flux w/ft²	120 Rho Interface Temp Amps	120 Rho Interface Temp °C	120 Rho Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						75% LF							
						50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	591	39	8.8	514	42	6.8	455	44	5.6	3.4	4.6	5.8
1000	Open	695	40	9.2	597	43	7.2	523	45	5.8	3.8	5.2	6.7
1250	Open	781	41	9.1	667	43	7.0	582	45	5.7	4.0	5.5	7.0
1500	Open	856	41	9.0	728	44	6.9	633	45	5.5	4.1	5.7	7.3
1750	Open	923	41	8.9	781	44	6.7	676	45	5.4	4.3	6.0	7.7
2000	Open	976	41	8.7	825	44	6.6	712	45	5.2	4.4	6.2	7.9
2250	Open	1028	42	8.7	865	44	6.5	743	46	5.2	4.6	6.4	8.2
						50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	993	41	8.7	839	44	6.6	724	45	5.2	4.4	6.2	7.9
2250	Open	1049	42	8.7	882	44	6.5	758	46	5.2	4.6	6.4	8.2
2500	Open	1101	42	8.6	924	44	6.5	792	46	5.1	4.7	6.5	8.4
2750	Open	1151	42	8.5	962	45	6.3	822	46	5.0	4.8	6.7	8.7
3000	Open	1191	42	8.4	993	45	6.3	846	46	4.9	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho Interface Temp Amps	60 Rho Interface Temp °C	60 Rho Interface Flux w/ft²	90 Rho Interface Temp Amps	90 Rho Interface Temp °C	90 Rho Interface Flux w/ft²	120 Rho Interface Temp Amps	120 Rho Interface Temp °C	120 Rho Interface Flux w/ft²	delta Td for .0033 pf & Rho 60	90	120
						100% LF							
						50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	528	42	7.3	449	44	5.6	392	45	4.5	3.4	4.6	5.8
1000	Open	617	42	7.6	519	45	5.7	448	46	4.6	3.8	5.2	6.7
1250	Open	691	43	7.4	578	45	5.6	497	46	4.5	4.0	5.5	7.0
1500	Open	755	43	7.4	629	45	5.5	539	46	4.4	4.1	5.7	7.3
1750	Open	812	43	7.2	673	45	5.4	574	47	4.3	4.3	6.0	7.7
2000	Open	858	43	7.1	709	46	5.2	604	47	4.2	4.4	6.2	7.9
2250	Open	901	44	7.0	742	46	5.2	629	47	4.2	4.6	6.4	8.2
						50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	873	43	7.1	721	46	5.2	614	47	4.2	4.4	6.2	7.9
2250	Open	919	44	7.0	757	46	5.2	641	47	4.2	4.6	6.4	8.2
2500	Open	964	44	6.9	792	46	5.1	669	47	4.1	4.7	6.5	8.4
2750	Open	1006	44	6.8	823	46	5.0	693	47	4.0	4.8	6.7	8.7
3000	Open	1039	44	6.8	848	46	5.0	713	47	4.0	4.9	6.9	8.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	92.2	74.6	73.2	57.2	60.9	46.5
1000	Open	98.1	78.5	77.0	59.6	63.2	47.9
1250	Open	101.0	80.5	78.9	60.8	64.6	48.8
1500	Open	103.8	82.3	80.6	61.9	65.9	49.5
1750	Open	106.6	84.2	82.4	62.9	67.1	50.2
2000	Open	107.7	84.8	83.1	63.3	67.5	50.5
2250	Open	110.0	86.4	84.6	64.2	68.5	51.1
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	107.6	84.7	83.0	63.3	67.4	50.6
2250	Open	110.1	86.3	84.6	64.2	68.5	51.2
2500	Open	111.6	87.3	85.4	64.9	69.0	51.6
2750	Open	113.6	88.5	86.7	65.6	69.8	52.1
3000	Open	114.9	89.5	87.6	66.1	70.5	52.5

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
75°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	76.8	62.4	61.0	47.9	50.6	38.8
1000	Open	81.7	65.7	64.0	49.8	52.5	40.1
1250	Open	84.1	67.3	65.6	50.7	53.6	40.7
1500	Open	86.5	68.8	67.0	51.7	54.5	41.3
1750	Open	88.8	70.3	68.4	52.5	55.5	41.9
2000	Open	89.7	70.9	69.0	52.9	55.9	42.2
2250	Open	91.7	72.2	70.3	53.7	56.7	42.8
75°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	89.5	70.8	68.9	52.9	55.8	42.2
2250	Open	91.5	72.2	70.2	53.7	56.7	42.8
2500	Open	92.8	72.9	71.0	54.1	57.2	43.1
2750	Open	94.5	74.0	72.0	54.8	57.8	43.5
3000	Open	95.6	74.7	72.7	55.2	58.3	43.8

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
65°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	61.5	50.2	48.7	38.4	40.3	31.2
1000	Open	65.3	52.8	51.0	40.0	41.7	32.2
1250	Open	67.3	54.1	52.3	40.8	42.5	32.8
1500	Open	69.1	55.2	53.3	41.6	43.3	33.2
1750	Open	70.9	56.4	54.4	42.1	44.0	33.7
2000	Open	71.5	56.9	54.9	42.5	44.3	34.0
2250	Open	73.1	57.9	55.9	43.1	45.0	34.3
65°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	71.5	56.8	54.9	42.5	44.3	34.0
2250	Open	73.0	57.9	55.9	43.1	44.9	34.3
2500	Open	74.1	58.6	56.4	43.5	45.4	34.6
2750	Open	75.2	59.3	57.1	44.0	45.8	34.9
3000	Open	76.2	59.9	57.6	44.3	46.2	35.1

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale

2350

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	60 Rho 75 LF	60 Rho 100 LF	90 Rho 75 LF	90 Rho 100 LF	120 Rho 75 LF	120 Rho 100 LF
		Total Watts/ft					
50°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	38.3	31.6	30.2	24.2	24.8	19.7
1000	Open	40.7	33.3	31.6	25.3	25.6	20.3
1250	Open	41.9	34.1	32.2	25.8	26.0	20.7
1500	Open	43.0	34.9	32.9	26.2	26.5	21.0
1750	Open	44.0	35.7	33.5	26.7	26.8	21.3
2000	Open	44.4	35.9	33.8	26.8	27.0	21.4
2250	Open	45.4	36.6	34.3	27.2	27.3	21.7
50°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	44.4	35.9	33.7	26.8	26.9	21.4
2250	Open	45.4	36.6	34.3	27.2	27.3	21.7
2500	Open	45.9	37.0	34.6	27.5	27.5	21.8
2750	Open	46.7	37.6	35.0	27.8	27.8	22.1
3000	Open	47.2	37.9	35.3	28.0	27.9	22.2

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
			85°C - Copper Conductor - Hollow Core Concentric Strand						
750	Open	2.791	0.84	17.78	1.002	1.70	0.21	2.95	4.44
1000	Open	2.823	0.97	13.41	1.003	1.47	0.21	2.94	4.43
1250	Open	2.940	1.04	10.83	1.004	1.38	0.20	2.92	4.41
1500	Open	3.058	1.10	9.14	1.006	1.30	0.20	2.90	4.39
1750	Open	3.175	1.16	7.97	1.008	1.23	0.19	2.89	4.38
2000	Open	3.286	1.20	7.11	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.46	1.013	1.14	0.20	2.85	4.35
			85°C - Copper Conductor - Hollow Core Segmental Strand						
2000	Open	3.283	1.19	6.90	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.25	1.013	1.14	0.20	2.85	4.35
2500	Open	3.475	1.29	5.69	1.022	1.10	0.20	2.83	4.34
2750	Open	3.570	1.34	5.23	1.026	1.06	0.19	2.82	4.32
3000	Open	3.651	1.38	4.89	1.031	1.03	0.19	2.80	4.29

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
75°C - Copper Conductor - Hollow Core Concentric Strand									
750	Open	2.791	0.84	17.78	1.002	1.70	0.21	2.95	4.44
1000	Open	2.823	0.97	13.41	1.003	1.47	0.21	2.94	4.43
1250	Open	2.940	1.04	10.83	1.004	1.38	0.20	2.92	4.41
1500	Open	3.058	1.10	9.14	1.006	1.30	0.20	2.90	4.39
1750	Open	3.175	1.16	7.97	1.008	1.23	0.19	2.89	4.38
2000	Open	3.286	1.20	7.11	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.46	1.013	1.14	0.20	2.85	4.35
75°C - Copper Conductor - Hollow Core Segmental Strand									
2000	Open	3.283	1.19	6.90	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.25	1.013	1.14	0.20	2.85	4.35
2500	Open	3.475	1.29	5.69	1.022	1.10	0.20	2.83	4.34
2750	Open	3.570	1.34	5.23	1.026	1.06	0.19	2.82	4.32
3000	Open	3.651	1.38	4.89	1.031	1.03	0.19	2.80	4.29

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
65°C - Copper Conductor - Hollow Core Concentric Strand									
750	Open	2.791	0.84	17.78	1.002	1.70	0.21	2.95	4.44
1000	Open	2.823	0.97	13.41	1.003	1.47	0.21	2.94	4.43
1250	Open	2.940	1.04	10.83	1.004	1.38	0.20	2.92	4.41
1500	Open	3.058	1.10	9.14	1.006	1.30	0.20	2.90	4.39
1750	Open	3.175	1.16	7.97	1.008	1.23	0.19	2.89	4.38
2000	Open	3.286	1.20	7.11	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.46	1.013	1.14	0.20	2.85	4.35
65°C - Copper Conductor - Hollow Core Segmental Strand									
2000	Open	3.283	1.19	6.90	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.25	1.013	1.14	0.20	2.85	4.35
2500	Open	3.475	1.29	5.69	1.022	1.10	0.20	2.83	4.34
2750	Open	3.570	1.34	5.23	1.026	1.06	0.19	2.82	4.32
3000	Open	3.651	1.38	4.89	1.031	1.03	0.19	2.80	4.29

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Direct Buried - 2 Circuits - Six Cables - Spaced

25°C Earth Ambient

Condr Size	Sheath Res	OD	Wd	Rac	Qs	Ri	Rj	Re @ 90 Rho & loss factor 75%	100%
			50°C - Copper Conductor - Hollow Core Concentric Strand						
750	Open	2.791	0.84	17.78	1.002	1.70	0.21	2.95	4.44
1000	Open	2.823	0.97	13.41	1.003	1.47	0.21	2.94	4.43
1250	Open	2.940	1.04	10.83	1.004	1.38	0.20	2.92	4.41
1500	Open	3.058	1.10	9.14	1.006	1.30	0.20	2.90	4.39
1750	Open	3.175	1.16	7.97	1.008	1.23	0.19	2.89	4.38
2000	Open	3.286	1.20	7.11	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.46	1.013	1.14	0.20	2.85	4.35
			50°C - Copper Conductor - Hollow Core Segmental Strand						
2000	Open	3.283	1.19	6.90	1.010	1.19	0.21	2.87	4.36
2250	Open	3.396	1.26	6.25	1.013	1.14	0.20	2.85	4.35
2500	Open	3.475	1.29	5.69	1.022	1.10	0.20	2.83	4.34
2750	Open	3.570	1.34	5.23	1.026	1.06	0.19	2.82	4.32
3000	Open	3.651	1.38	4.89	1.031	1.03	0.19	2.80	4.29

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Conduit in Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s	delta Td for .0033 pf No Sun 0 Ft/s	delta Td for .0033 pf No Sun 2 Ft/s
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	688	710	441	522	3.4	3.2
1000	Open	810	838	517	614	3.8	3.6
1250	Open	918	950	585	695	4.0	3.7
1500	Open	1015	1051	646	769	4.1	3.8
1750	Open	1104	1145	701	836	4.2	3.9
2000	Open	1209	1247	757	894	4.0	3.8
2250	Open	1280	1321	801	946	4.1	3.9
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1223	1261	766	904	4.0	3.8
2250	Open	1304	1345	815	963	4.1	3.9
2500	Open	1379	1424	862	1019	4.2	3.9
2750	Open	1454	1502	908	1075	4.3	4.0
3000	Open	1517	1567	946	1121	4.3	4.0

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Conduit in Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s
		Total Watts/ft			
85°C - Copper Conductor - Hollow Core Concentric Strand					
750	Open	27.8	29.4	12.9	17.0
1000	Open	29.3	31.1	13.7	18.1
1250	Open	30.4	32.4	14.2	18.8
1500	Open	31.4	33.5	14.7	19.4
1750	Open	32.5	34.6	15.2	20.1
2000	Open	34.5	36.5	15.7	20.5
2250	Open	35.5	37.6	16.2	21.1
85°C - Copper Conductor - Hollow Core Segmental Strand					
2000	Open	34.5	36.4	15.7	20.5
2250	Open	35.6	37.6	16.2	21.1
2500	Open	36.2	38.3	16.5	21.5
2750	Open	37.0	39.2	16.9	22.1
3000	Open	37.7	40.0	17.2	22.5

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Conduit in Air

40°C Air Ambient

Condr Size	Sheath Res	OD	Duct ID	Wd	Rac	Qs	Ri	Rj	Rsd	Rd	Re No Sun 0 fps	Re Sun 2 fps
					85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	2.791	4.03	0.84	17.78	1.000	1.70	0.21	1.78	0.35	0.90	0.61
1000	Open	2.823	4.03	0.97	13.40	1.000	1.47	0.21	1.76	0.35	0.89	0.61
1250	Open	2.940	4.03	1.04	10.80	1.000	1.38	0.20	1.69	0.35	0.89	0.61
1500	Open	3.058	4.03	1.10	9.11	1.000	1.30	0.20	1.63	0.35	0.89	0.61
1750	Open	3.175	4.03	1.16	7.92	1.000	1.23	0.19	1.57	0.35	0.88	0.61
2000	Open	3.286	5.05	1.20	7.05	1.000	1.19	0.21	1.53	0.31	0.74	0.51
2250	Open	3.396	5.05	1.26	6.46	1.000	1.14	0.20	1.48	0.31	0.73	0.51
					85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	3.283	5.05	1.19	6.88	1.000	1.19	0.21	1.53	0.31	0.74	0.51
2250	Open	3.396	5.05	1.26	6.23	1.000	1.14	0.20	1.48	0.31	0.73	0.51
2500	Open	3.475	5.05	1.29	5.66	1.000	1.10	0.20	1.45	0.31	0.73	0.51
2750	Open	3.570	5.05	1.34	5.20	1.000	1.06	0.19	1.42	0.31	0.73	0.51
3000	Open	3.651	5.05	1.38	4.86	1.000	1.03	0.19	1.39	0.31	0.73	0.51

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2358

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Free Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s	delta Td for .0033 pf No Sun 0 Ft/s	delta Td for .0033 pf No Sun 2 Ft/s
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	874	937	596	723	1.9	1.6
1000	Open	1050	1129	714	870	2.1	1.8
1250	Open	1199	1289	813	990	2.1	1.8
1500	Open	1336	1436	904	1099	2.2	1.8
1750	Open	1465	1574	989	1201	2.2	1.8
2000	Open	1569	1683	1057	1281	2.2	1.9
2250	Open	1671	1793	1123	1361	2.3	1.9
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1587	1703	1069	1296	2.2	1.9
2250	Open	1702	1826	1144	1385	2.3	1.9
2500	Open	1808	1939	1213	1468	2.3	1.9
2750	Open	1916	2054	1284	1552	2.3	1.9
3000	Open	2006	2150	1342	1622	2.3	1.9

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Free Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s
		Total Watts/ft			
85°C - Copper Conductor - Hollow Core Concentric Strand					
750	Open	14.4	16.4	7.2	10.1
1000	Open	15.7	18.0	7.8	11.1
1250	Open	16.6	19.0	8.2	11.6
1500	Open	17.3	19.9	8.5	12.1
1750	Open	18.2	20.8	8.9	12.6
2000	Open	18.6	21.2	9.1	12.8
2250	Open	19.3	22.0	9.4	13.2
85°C - Copper Conductor - Hollow Core Segmental Strand					
2000	Open	18.5	21.2	9.1	12.8
2250	Open	19.3	22.0	9.4	13.2
2500	Open	19.8	22.6	9.6	13.5
2750	Open	20.4	23.3	9.9	13.9
3000	Open	21.0	23.9	10.1	14.2

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2360

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Free Air

40°C Air Ambient

Condr Size	Sheath Res	OD	Duct ID	Wd	Rac	Qs	Ri	Rj	Rsd	Rd	Re No Sun 0 fps	Re No Sun 2 fps
					85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	2.791	9.99	0.84	17.78	1.000	1.70	0.21	0.00	0.00	1.25	0.86
1000	Open	2.823	9.99	0.97	13.40	1.000	1.47	0.21	0.00	0.00	1.23	0.85
1250	Open	2.940	9.99	1.04	10.80	1.000	1.38	0.20	0.00	0.00	1.18	0.83
1500	Open	3.058	9.99	1.10	9.11	1.000	1.30	0.20	0.00	0.00	1.14	0.80
1750	Open	3.175	9.99	1.16	7.92	1.000	1.23	0.19	0.00	0.00	1.10	0.78
2000	Open	3.286	9.99	1.20	7.05	1.000	1.19	0.21	0.00	0.00	1.07	0.76
2250	Open	3.396	9.99	1.26	6.46	1.000	1.14	0.20	0.00	0.00	1.03	0.74
					85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	3.283	9.99	1.19	6.88	1.000	1.19	0.21	0.00	0.00	1.07	0.76
2250	Open	3.396	9.99	1.26	6.23	1.000	1.14	0.20	0.00	0.00	1.03	0.74
2500	Open	3.475	9.99	1.29	5.66	1.000	1.10	0.20	0.00	0.00	1.01	0.73
2750	Open	3.570	9.99	1.34	5.20	1.000	1.06	0.19	0.00	0.00	0.99	0.71
3000	Open	3.651	9.99	1.38	4.86	1.000	1.03	0.19	0.00	0.00	0.97	0.70

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Unventilated Riser in Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s	delta Td for .0033 pf No Sun 0 Ft/s	delta Td for .0033 pf No Sun 2 Ft/s
85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	716	743	543	612	3.1	2.9
1000	Open	846	880	640	723	3.5	3.2
1250	Open	959	999	725	820	3.6	3.3
1500	Open	1061	1106	802	908	3.7	3.4
1750	Open	1154	1205	872	988	3.8	3.5
2000	Open	1272	1316	960	1069	3.6	3.4
2250	Open	1347	1395	1017	1132	3.7	3.4
85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	1286	1332	972	1081	3.6	3.4
2250	Open	1371	1421	1035	1153	3.7	3.4
2500	Open	1451	1504	1095	1220	3.8	3.5
2750	Open	1530	1587	1155	1287	3.8	3.5
3000	Open	1596	1656	1204	1343	3.9	3.6

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

2362

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Unventilated Riser in Air

40°C Air Ambient

Condr Size	Sheath Res	No Sun 0 Ft/s	No Sun 2 Ft/s	Full Sun 0 Ft/s	Full Sun 2 Ft/s
		Total Watts/ft			
85°C - Copper Conductor - Hollow Core Concentric Strand					
750	Open	9.9	10.6	6.1	7.5
1000	Open	10.6	11.3	6.5	8.0
1250	Open	11.0	11.8	6.7	8.3
1500	Open	11.3	12.2	7.0	8.6
1750	Open	11.7	12.7	7.2	8.9
2000	Open	12.6	13.4	7.7	9.3
2250	Open	13.0	13.8	7.9	9.5
85°C - Copper Conductor - Hollow Core Segmental Strand					
2000	Open	12.6	13.4	7.7	9.2
2250	Open	13.0	13.8	7.9	9.5
2500	Open	13.2	14.1	8.1	9.7
2750	Open	13.5	14.4	8.3	10.0
3000	Open	13.8	14.7	8.4	10.2

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS
Not for Resale

138 kV 1/c Self Contained Liquid Filled Lead Sheathed Power Cable

Isolated Cable in Non-Metallic Unventilated Riser in Air

40°C Air Ambient

Condr Size	Sheath Res	OD	Duct ID	Wd	Rac	Qs	Ri	Rj	Rsd	Rd	Re No Sun 0 fps	Re No Sun 2 fps
					85°C - Copper Conductor - Hollow Core Concentric Strand							
750	Open	2.791	4.03	0.84	17.78	1.000	1.70	0.21	1.42	0.35	0.91	0.61
1000	Open	2.823	4.03	0.97	13.40	1.000	1.47	0.21	1.39	0.35	0.91	0.61
1250	Open	2.940	4.03	1.04	10.80	1.000	1.38	0.20	1.33	0.35	0.90	0.61
1500	Open	3.058	4.03	1.10	9.11	1.000	1.30	0.20	1.28	0.35	0.90	0.61
1750	Open	3.175	4.03	1.16	7.92	1.000	1.23	0.19	1.24	0.35	0.90	0.60
2000	Open	3.286	5.05	1.20	7.05	1.000	1.19	0.21	1.19	0.31	0.74	0.51
2250	Open	3.396	5.05	1.26	6.46	1.000	1.14	0.20	1.15	0.31	0.73	0.51
					85°C - Copper Conductor - Hollow Core Segmental Strand							
2000	Open	3.283	5.05	1.19	6.88	1.000	1.19	0.21	1.19	0.31	0.74	0.51
2250	Open	3.396	5.05	1.26	6.23	1.000	1.14	0.20	1.15	0.31	0.73	0.51
2500	Open	3.475	5.05	1.29	5.66	1.000	1.10	0.20	1.12	0.31	0.73	0.51
2750	Open	3.570	5.05	1.34	5.20	1.000	1.06	0.19	1.09	0.31	0.73	0.51
3000	Open	3.651	5.05	1.38	4.86	1.000	1.03	0.19	1.07	0.31	0.73	0.51

Copyright The Institute of Electrical and Electronics Engineers, Inc.
Provided by IHS under license with IEEE
No reproduction or networking permitted without license from IHS

Not for Resale