230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	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 .0025 pf & Rho 60	delta Td for .0025 pf & Rho 90	delta Td for .0025 pf & Rho 120
		85°C - Copper Conductor - Compact Round Strand								
1000	8.125	794	729	731	651	679	589	6.3	7.9	9.5
1250	8.125	876	800	802	709	741	639	6.6	8.3	10.1
		85°C - Copper Conductor - Compact Segmental Strand								
1000	8.125	834	763	765	678	708	612	6.5	8.2	9.9
1250	8.125	932	849	851	750	784	674	6.8	8.6	10.4
1500	8.125	1017	922	924	810	848	724	7.0	8.9	10.9
1750	8.125	1091	984	986	860	901	766	7.3	9.3	11.3
2000	8.125	1153	1037	1038	902	946	801	7.5	9.6	11.7
2250	8.125	1216	1084	1082	932	976	819	8.8	11.3	13.9
2500	8.125	1262	1122	1119	960	1006	842	8.9	11.6	14.3
2750	8.125	1303	1154	1150	984	1031	861	9.2	12.0	14.8
3000	8.125	1334	1179	1174	1003	1050	874	9.4	12.3	15.2

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	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 - Compact Round Strand						
1000	8.125	36.6	31.5	31.6	25.9	27.8	21.9
1250	8.125	38.9	33.1	33.2	26.9	29.0	22.6
	85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	38.0	32.4	32.6	26.5	28.5	22.3
1250	8.125	40.1	34.0	34.2	27.5	29.7	23.0
1500	8.125	42.2	35.5	35.6	28.4	30.7	23.6
1750	8.125	44.1	36.8	36.9	29.2	31.6	24.1
2000	8.125	45.6	37.9	37.9	29.8	32.3	24.6
2250	8.125	49.0	40.1	40.0	31.3	33.7	25.5
2500	8.125	50.2	41.0	40.8	31.7	34.2	25.8
2750	8.125	51.5	41.8	41.6	32.2	34.7	26.2
3000	8.125	52.5	42.5	42.2	32.6	35.1	26.4

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	14.75	1.019	1.178	2.81	0.00	0.82	0.10	2.41	3.95
1250	8.125	2.955	1.36	12.45	1.021	1.213	2.61	0.00	0.78	0.10	2.41	3.95
					85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	13.65	1.020	1.194	2.68	0.00	0.79	0.10	2.41	3.95
1250	8.125	3.030	1.42	11.10	1.023	1.241	2.50	0.00	0.76	0.10	2.41	3.95
1500	8.125	3.145	1.50	9.45	1.025	1.285	2.35	0.00	0.73	0.10	2.41	3.95
1750	8.125	3.250	1.58	8.30	1.027	1.328	2.23	0.00	0.70	0.10	2.41	3.95
2000	8.125	3.340	1.65	7.46	1.029	1.368	2.14	0.00	0.68	0.10	2.41	3.95
2250	8.125	3.155	2.02	6.97	1.034	1.387	1.77	0.00	0.69	0.10	2.41	3.95
2500	8.125	3.230	2.09	6.48	1.035	1.419	1.71	0.00	0.67	0.10	2.41	3.95
2750	8.125	3.320	2.17	6.10	1.036	1.449	1.64	0.00	0.65	0.10	2.41	3.95
3000	8.125	3.400	2.24	5.82	1.036	1.473	1.59	0.00	0.63	0.10	2.41	3.95

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

2892

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 .0025 pf & Rho 60	90	120
		85°C - Copper Conductor - Compact Round Strand								
1000	8.125	739	664	663	577	602	512	7.6	9.9	12.2
1250	8.125	811	724	723	625	652	552	8.0	10.5	13.0
		85°C - Copper Conductor - Compact Segmental Strand								
1000	8.125	773	692	691	599	625	530	7.9	10.3	12.7
1250	8.125	860	766	764	659	687	580	8.3	10.8	13.4
1500	8.125	935	828	825	707	739	620	8.6	11.3	14.1
1750	8.125	998	880	876	748	781	652	8.9	11.8	14.7
2000	8.125	1051	923	918	781	816	679	9.2	12.2	15.2
2250	8.125	1097	956	944	797	826	684	10.8	14.5	18.2
2500	8.125	1135	986	972	819	848	700	11.1	14.9	18.8
2750	8.125	1168	1011	995	836	865	712	11.4	15.4	19.4
3000	8.125	1193	1030	1013	849	878	721	11.7	15.8	19.9

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 - Compact Round Strand						
1000	8.125	64.5	53.5	53.4	42.3	45.4	34.9
1250	8.125	67.8	55.7	55.5	43.6	46.7	35.8
	85°C - Copper Conductor - Compact Segmental Strand						
1000	8.125	66.4	54.8	54.7	43.0	46.2	35.4
1250	8.125	69.6	57.0	56.7	44.4	47.5	36.3
1500	8.125	72.7	59.0	58.6	45.4	48.8	37.0
1750	8.125	75.4	60.7	60.2	46.5	49.8	37.6
2000	8.125	77.5	62.0	61.5	47.2	50.7	38.1
2250	8.125	81.9	65.1	63.8	49.0	51.7	39.3
2500	8.125	83.6	66.2	64.7	49.5	52.2	39.6
2750	8.125	85.3	67.2	65.5	50.1	52.7	39.9
3000	8.125	86.6	68.0	66.2	50.5	53.1	40.2

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

2894

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	100%
					85°C - Copper Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	14.75	1.019	1.178	2.81	0.00	0.76	0.10	2.75	4.49
1250	8.125	2.955	1.36	12.45	1.021	1.213	2.61	0.00	0.73	0.10	2.75	4.49
					85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	13.65	1.020	1.194	2.68	0.00	0.74	0.10	2.75	4.49
1250	8.125	3.030	1.42	11.10	1.023	1.241	2.50	0.00	0.71	0.10	2.75	4.49
1500	8.125	3.145	1.50	9.45	1.025	1.285	2.35	0.00	0.68	0.10	2.75	4.49
1750	8.125	3.250	1.58	8.30	1.027	1.328	2.23	0.00	0.65	0.10	2.75	4.49
2000	8.125	3.340	1.65	7.46	1.029	1.368	2.14	0.00	0.63	0.10	2.75	4.49
2250	8.125	3.155	2.02	6.97	1.034	1.387	1.77	0.00	0.65	0.10	2.75	4.49
2500	8.125	3.230	2.09	6.48	1.035	1.419	1.71	0.00	0.64	0.10	2.75	4.49
2750	8.125	3.320	2.17	6.10	1.036	1.449	1.64	0.00	0.62	0.10	2.75	4.49
3000	8.125	3.400	2.24	5.82	1.036	1.473	1.59	0.00	0.60	0.10	2.75	4.49

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 .0025 pf & Rho 60	90	120
		85°C - Copper Conductor - Compact Round Strand								
1000	8.125	755	682	682	597	623	533	7.2	9.3	11.4
1250	8.125	829	745	745	648	677	575	7.6	9.8	12.1
		85°C - Copper Conductor - Compact Segmental Strand								
1000	8.125	790	712	712	621	648	552	7.5	9.6	11.8
1250	8.125	881	789	788	684	714	605	7.8	10.1	12.5
1500	8.125	959	854	853	735	769	648	8.1	10.6	13.1
1750	8.125	1024	908	906	778	814	683	8.4	11.0	13.7
2000	8.125	1080	955	952	814	851	712	8.7	11.4	14.1
2250	8.125	1131	991	982	833	868	720	10.2	13.6	16.9
2500	8.125	1171	1023	1013	857	892	738	10.5	13.9	17.4
2750	8.125	1206	1050	1038	876	911	752	10.8	14.4	18.0
3000	8.125	1233	1070	1058	891	925	762	11.0	14.8	18.5

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 - Compact Round Strand							
1000	8.125	67.0	56.1	56.1	44.7	48.0	37.2
1250	8.125	70.4	58.5	58.5	46.2	49.7	38.1
85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	69.0	57.5	57.5	45.7	49.0	37.8
1250	8.125	72.6	60.0	59.8	47.2	50.6	38.7
1500	8.125	76.0	62.2	62.0	48.4	52.1	39.6
1750	8.125	78.8	64.0	63.8	49.5	53.3	40.3
2000	8.125	81.3	65.7	65.4	50.5	54.2	40.9
2250	8.125	86.3	69.1	68.1	52.4	55.8	42.2
2500	8.125	88.2	70.3	69.1	53.0	56.4	42.6
2750	8.125	90.1	71.5	70.1	53.7	57.0	43.0
3000	8.125	91.6	72.3	71.0	54.3	57.4	43.3

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Copper Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	14.75	1.019	1.178	2.81	0.00	0.78	0.10	2.65	4.32
1250	8.125	2.955	1.36	12.45	1.021	1.213	2.61	0.00	0.75	0.10	2.65	4.32
					85°C - Copper Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	13.65	1.020	1.194	2.68	0.00	0.76	0.10	2.65	4.32
1250	8.125	3.030	1.42	11.10	1.023	1.241	2.50	0.00	0.73	0.10	2.65	4.32
1500	8.125	3.145	1.50	9.45	1.025	1.285	2.35	0.00	0.70	0.10	2.65	4.32
1750	8.125	3.250	1.58	8.30	1.027	1.328	2.23	0.00	0.67	0.10	2.65	4.32
2000	8.125	3.340	1.65	7.46	1.029	1.368	2.14	0.00	0.65	0.10	2.65	4.32
2250	8.125	3.155	2.02	6.97	1.034	1.387	1.77	0.00	0.66	0.10	2.65	4.32
2500	8.125	3.230	2.09	6.48	1.035	1.419	1.71	0.00	0.64	0.10	2.65	4.32
2750	8.125	3.320	2.17	6.10	1.036	1.449	1.64	0.00	0.62	0.10	2.65	4.32
3000	8.125	3.400	2.24	5.82	1.036	1.473	1.59	0.00	0.61	0.10	2.65	4.32

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

2898

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	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 .0025 pf & Rho 60	delta Td for .0025 pf & Rho 90	delta Td for .0025 pf & Rho 120
85°C - Aluminum Conductor - Compact Round Strand										
1000	8.125	646	594	596	532	554	483	6.3	7.9	9.5
1250	8.125	724	664	665	590	616	533	6.6	8.3	10.1
85°C - Aluminum Conductor - Compact Segmental Strand										
1000	8.125	663	609	611	543	567	492	6.5	8.2	9.9
1250	8.125	749	684	686	607	634	547	6.8	8.6	10.4
1500	8.125	826	751	752	663	693	595	7.0	9.0	10.9
1750	8.125	894	811	812	712	744	636	7.3	9.3	11.3
2000	8.125	956	864	864	755	790	673	7.5	9.6	11.7
2250	8.125	1024	917	915	792	827	698	8.8	11.3	13.9
2500	8.125	1074	960	956	825	863	726	9.0	11.6	14.3
2750	8.125	1121	998	994	856	894	750	9.2	12.0	14.8
3000	8.125	1159	1030	1025	879	919	769	9.4	12.3	15.2
3250	10.25	1224	1076	1089	921	982	808	9.2	11.9	14.6
3500	10.25	1261	1106	1119	943	1006	824	9.4	12.3	15.1
3750	10.25	1294	1131	1145	963	1027	840	9.6	12.5	15.4
4000	10.25	1325	1155	1168	980	1045	853	9.8	12.8	15.8

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	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 - Aluminum Conductor - Compact Round Strand							
1000	8.125	35.6	30.7	30.8	25.3	27.2	21.5
1250	8.125	37.5	32.2	32.3	26.3	28.3	22.2
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	36.5	31.4	31.6	25.8	27.8	21.9
1250	8.125	38.6	32.9	33.1	26.8	28.9	22.6
1500	8.125	40.4	34.2	34.3	27.7	29.8	23.2
1750	8.125	42.0	35.4	35.5	28.4	30.6	23.6
2000	8.125	43.5	36.5	36.5	29.0	31.3	24.1
2250	8.125	46.9	38.8	38.7	30.5	32.7	25.0
2500	8.125	48.1	39.7	39.4	31.0	33.3	25.4
2750	8.125	49.4	40.5	40.2	31.5	33.8	25.7
3000	8.125	50.4	41.2	40.9	31.9	34.2	26.0
3250	10.25	55.3	44.3	45.2	34.3	38.0	28.0
3500	10.25	56.6	45.2	46.1	34.8	38.6	28.3
3750	10.25	57.6	45.7	46.7	35.2	39.0	28.5
4000	10.25	58.7	46.4	47.3	35.5	39.4	28.8

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

2900

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - One Circuit

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	100%
					85°C - Aluminum Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	22.76	1.012	1.115	2.81	0.00	0.82	0.10	2.41	3.95
1250	8.125	2.955	1.36	18.60	1.014	1.143	2.61	0.00	0.79	0.10	2.41	3.95
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	22.04	1.012	1.120	2.68	0.00	0.80	0.10	2.41	3.95
1250	8.125	3.030	1.42	17.73	1.014	1.151	2.50	0.00	0.77	0.10	2.41	3.95
1500	8.125	3.145	1.50	14.85	1.016	1.182	2.35	0.00	0.73	0.10	2.41	3.95
1750	8.125	3.250	1.58	12.83	1.018	1.212	2.23	0.00	0.71	0.10	2.41	3.95
2000	8.125	3.340	1.65	11.32	1.019	1.242	2.14	0.00	0.69	0.10	2.41	3.95
2250	8.125	3.155	2.02	10.30	1.023	1.262	1.77	0.00	0.70	0.10	2.41	3.95
2500	8.125	3.230	2.09	9.37	1.024	1.290	1.71	0.00	0.68	0.10	2.41	3.95
2750	8.125	3.320	2.17	8.64	1.025	1.317	1.64	0.00	0.66	0.10	2.41	3.95
3000	8.125	3.400	2.24	8.09	1.026	1.340	1.59	0.00	0.64	0.10	2.41	3.95
3250	10.25	3.475	2.31	7.58	1.030	1.418	1.54	0.00	0.63	0.13	2.10	3.63
3500	10.25	3.575	2.40	7.16	1.031	1.447	1.48	0.00	0.61	0.13	2.10	3.63
3750	10.25	3.640	2.46	6.79	1.032	1.473	1.45	0.00	0.60	0.13	2.10	3.63
4000	10.25	3.715	2.53	6.48	1.032	1.499	1.41	0.00	0.59	0.13	2.10	3.63

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	60 Rho		90 Rho		120 Rho		delta Td for .0025 pf & Rho		
		75 LF	100 LF	75 LF	100 LF	75 LF	100 LF	60	90	120
		85°C - Aluminum Conductor - Compact Round Strand								
1000	8.125	602	542	541	473	492	420	7.6	9.9	12.2
1250	8.125	672	602	601	522	544	461	8.0	10.5	12.9
		85°C - Aluminum Conductor - Compact Segmental Strand								
1000	8.125	617	554	553	482	502	427	7.9	10.3	12.7
1250	8.125	693	620	618	535	557	472	8.3	10.8	13.4
1500	8.125	761	677	674	581	605	510	8.6	11.3	14.1
1750	8.125	821	728	724	621	647	543	8.9	11.8	14.7
2000	8.125	875	773	768	657	684	572	9.2	12.2	15.2
2250	8.125	928	812	801	680	704	584	10.9	14.5	18.2
2500	8.125	970	847	835	706	731	605	11.1	14.9	18.8
2750	8.125	1009	878	864	729	754	622	11.5	15.4	19.4
3000	8.125	1041	903	888	747	771	636	11.8	15.8	19.9
3250	10.25	1089	936	933	776	813	661	11.6	15.6	19.6
3500	10.25	1119	958	954	791	828	671	11.9	16.1	20.2
3750	10.25	1145	978	973	805	842	681	12.2	16.4	20.7
4000	10.25	1168	996	989	817	853	689	12.4	16.8	21.2

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

2902

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 - Aluminum Conductor - Compact Round Strand							
1000	8.125	62.8	52.3	52.1	41.6	44.4	34.4
1250	8.125	65.7	54.4	54.2	42.9	45.9	35.3
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	64.3	53.4	53.2	42.4	45.3	35.0
1250	8.125	67.3	55.6	55.2	43.5	46.5	35.8
1500	8.125	70.0	57.3	56.9	44.6	47.6	36.4
1750	8.125	72.4	59.0	58.4	45.5	48.6	37.0
2000	8.125	74.5	60.3	59.7	46.3	49.4	37.5
2250	8.125	79.3	63.5	62.1	48.2	50.8	38.7
2500	8.125	80.8	64.6	63.1	48.7	51.3	39.1
2750	8.125	82.5	65.6	64.0	49.3	51.8	39.4
3000	8.125	84.0	66.5	64.8	49.8	52.1	39.8
3250	10.25	90.4	70.4	70.0	52.7	56.5	42.0
3500	10.25	92.2	71.4	70.9	53.3	57.0	42.4
3750	10.25	93.4	72.1	71.5	53.6	57.3	42.6
4000	10.25	94.6	72.9	72.1	54.0	57.5	42.8

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 24 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	Re @ 90 Rho & loss factor 100%
					85°C - Aluminum Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	22.76	1.012	1.115	2.81	0.00	0.77	0.10	2.75	4.49
1250	8.125	2.955	1.36	18.60	1.014	1.143	2.61	0.00	0.73	0.10	2.75	4.49
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	22.04	1.012	1.120	2.68	0.00	0.75	0.10	2.75	4.49
1250	8.125	3.030	1.42	17.73	1.014	1.151	2.50	0.00	0.71	0.10	2.75	4.49
1500	8.125	3.145	1.50	14.85	1.016	1.182	2.35	0.00	0.68	0.10	2.75	4.49
1750	8.125	3.250	1.58	12.83	1.018	1.212	2.23	0.00	0.66	0.10	2.75	4.49
2000	8.125	3.340	1.65	11.32	1.019	1.242	2.14	0.00	0.64	0.10	2.75	4.49
2250	8.125	3.155	2.02	10.30	1.023	1.262	1.77	0.00	0.66	0.10	2.75	4.49
2500	8.125	3.230	2.09	9.37	1.024	1.290	1.71	0.00	0.64	0.10	2.75	4.49
2750	8.125	3.320	2.17	8.64	1.025	1.317	1.64	0.00	0.62	0.10	2.75	4.49
3000	8.125	3.400	2.24	8.09	1.026	1.340	1.59	0.00	0.61	0.10	2.75	4.49
3250	10.25	3.475	2.31	7.58	1.030	1.418	1.54	0.00	0.60	0.13	2.43	4.17
3500	10.25	3.575	2.40	7.16	1.031	1.447	1.48	0.00	0.58	0.13	2.43	4.17
3750	10.25	3.640	2.46	6.79	1.032	1.473	1.45	0.00	0.57	0.13	2.43	4.17
4000	10.25	3.715	2.53	6.48	1.032	1.499	1.41	0.00	0.56	0.13	2.43	4.17

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

2904

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 .0025 pf & Rho 60	delta Td for .0025 pf & Rho 90	delta Td for .0025 pf & Rho 120
		85°C - Aluminum Conductor - Compact Round Strand								
1000	8.125	614	557	557	489	510	437	7.2	9.3	11.4
1250	8.125	687	620	619	541	564	481	7.6	9.8	12.1
		85°C - Aluminum Conductor - Compact Segmental Strand								
1000	8.125	630	570	569	499	520	444	7.5	9.6	11.8
1250	8.125	709	638	637	555	579	492	7.8	10.1	12.5
1500	8.125	779	698	696	603	630	533	8.1	10.6	13.1
1750	8.125	842	751	748	646	674	568	8.4	11.0	13.7
2000	8.125	898	798	795	683	713	599	8.7	11.4	14.1
2250	8.125	955	841	832	710	738	615	10.2	13.6	16.9
2500	8.125	1000	878	868	739	767	638	10.5	13.9	17.4
2750	8.125	1041	911	900	764	792	657	10.8	14.4	18.0
3000	8.125	1074	938	926	783	812	672	11.1	14.8	18.5
3250	10.25	1127	974	976	814	859	700	10.9	14.5	18.1
3500	10.25	1159	998	999	831	876	712	11.2	14.9	18.7
3750	10.25	1187	1020	1020	846	892	723	11.4	15.2	19.1
4000	10.25	1212	1038	1038	860	905	733	11.6	15.6	19.5

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

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	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 - Aluminum Conductor - Compact Round Strand							
1000	8.125	65.0	54.8	54.8	44.0	47.2	36.7
1250	8.125	68.3	57.2	57.0	45.5	48.7	37.7
85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	66.7	56.1	55.9	44.8	48.0	37.2
1250	8.125	70.0	58.3	58.2	46.2	49.5	38.1
1500	8.125	72.9	60.3	60.0	47.3	50.8	38.9
1750	8.125	75.7	62.1	61.7	48.4	51.9	39.6
2000	8.125	78.0	63.6	63.2	49.3	52.8	40.2
2250	8.125	83.2	67.3	66.1	51.4	54.6	41.6
2500	8.125	85.1	68.5	67.2	52.1	55.2	42.1
2750	8.125	87.0	69.6	68.3	52.8	55.8	42.5
3000	8.125	88.5	70.7	69.2	53.3	56.3	42.8
3250	10.25	95.8	75.1	75.3	56.6	61.5	45.5
3500	10.25	97.9	76.3	76.4	57.3	62.1	45.9
3750	10.25	99.3	77.2	77.2	57.7	62.5	46.1
4000	10.25	100.7	77.9	77.9	58.2	62.9	46.5

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

2906

230 kV Paper Insulated High Pressure Liquid Filled Pipe Type Cable

Buried - Two Circuits - 36 in. Spacing

25°C Earth Ambient

Condr Size	Pipe ID	OD	Wd	Rac	Qs	Qe	Ri	Rj	Rsd	Rd	Re @ 90 Rho & loss factor 75%	100%
					85°C - Aluminum Conductor - Compact Round Strand							
1000	8.125	2.830	1.26	22.76	1.012	1.115	2.81	0.00	0.79	0.10	2.65	4.32
1250	8.125	2.955	1.36	18.60	1.014	1.143	2.61	0.00	0.75	0.10	2.65	4.32
					85°C - Aluminum Conductor - Compact Segmental Strand							
1000	8.125	2.910	1.33	22.04	1.012	1.120	2.68	0.00	0.77	0.10	2.65	4.32
1250	8.125	3.030	1.42	17.73	1.014	1.151	2.50	0.00	0.73	0.10	2.65	4.32
1500	8.125	3.145	1.50	14.85	1.016	1.182	2.35	0.00	0.70	0.10	2.65	4.32
1750	8.125	3.250	1.58	12.83	1.018	1.212	2.23	0.00	0.68	0.10	2.65	4.32
2000	8.125	3.340	1.65	11.32	1.019	1.242	2.14	0.00	0.66	0.10	2.65	4.32
2250	8.125	3.155	2.02	10.30	1.023	1.262	1.77	0.00	0.67	0.10	2.65	4.32
2500	8.125	3.230	2.09	9.37	1.024	1.290	1.71	0.00	0.65	0.10	2.65	4.32
2750	8.125	3.320	2.17	8.64	1.025	1.317	1.64	0.00	0.63	0.10	2.65	4.32
3000	8.125	3.400	2.24	8.09	1.026	1.340	1.59	0.00	0.62	0.10	2.65	4.32
3250	10.25	3.475	2.31	7.58	1.030	1.418	1.54	0.00	0.61	0.13	2.33	4.01
3500	10.25	3.575	2.40	7.16	1.031	1.447	1.48	0.00	0.59	0.13	2.33	4.01
3750	10.25	3.640	2.46	6.79	1.032	1.473	1.45	0.00	0.58	0.13	2.33	4.01
4000	10.25	3.715	2.53	6.48	1.032	1.499	1.41	0.00	0.56	0.13	2.33	4.01

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