



PDHonline Course E270U (3 PDH)

Simplified Short-Circuit Calculations (Audio Version)

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2020

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Available Short Circuit Kilo-Amps Using EasyPower™ ver. 8.0.2.303, ESA

SC kA	480V, 500 kVA, 5.5%							
	Cable				Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	10.934							
0								
10								
20	10.551	10.556	10.579	10.597	10.763	10.831	10.879	10.890
50	10.005	10.021	10.081	10.125	10.515	10.667	10.798	10.824
100	9.093	9.143	9.282	9.383	10.103	10.424	10.663	10.715
200	7.746	7.881	8.098	8.251	9.419	9.931	10.394	10.500
500						8.594	9.614	9.878
1000								
2000								
5000								
10000	0.421	0.453	0.529	0.595	1.124			

SC kA	480V, 500 kVA, 2.5%							
	Cable				Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	24.052							
0								
10								
20	22.244	22.273	22.387	22.473	23.238	23.238	22.820	23.858
50	19.844	19.942	20.227	20.432	22.107	22.820	23.396	23.569
100	16.631	16.836	17.344	17.707	20.351	21.634	22.747	23.090
200	12.255	12.584	13.333	13.872	17.656	19.452	21.484	22.148
500	6.775	7.104	7.848	8.414	12.564	14.504	18.113	19.522
1000	3.824	4.061	4.609	5.047	8.414	9.880	13.981	15.969
2000						5.911	9.237	11.380
5000								5.895
10000	0.428	0.462	0.542	0.612	1.187			

SC kA	480V, 1000 kVA, 5.5%, 1203FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	21.865							
0								
10								
20	20.365	20.389	20.483	20.554	21.191	21.455	21.648	21.690
50	18.349	18.428	18.665	18.836	20.248	20.846	21.323	21.429
100	15.389	15.585	16.063	16.406	18.766	19.860	20.786	20.999
200	11.786	12.067	12.713	13.172	16.500	18.026	19.736	20.161
500	6.619	6.926	7.618	8.140	11.953	13.741	16.890	17.864
1000					8.140	9.550	13.283	14.780
2000						5.803	9.040	10.739
5000								5.716
10000	0.427	0.461	0.541	0.610	1.181			

SC kA	480V, 1000 kVA, 2.5%, 1203FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	48.094							
0								
10								
20	41.198	41.345	41.805	42.139	44.937	46.118	47.044	47.322
50	33.257	33.668	34.690	35.409	40.857	43.261	45.485	46.172
100	24.682	25.324	26.794	27.844	35.409	38.897	42.960	44.289
200	15.892	16.587	18.153	19.332	27.741	31.812	38.313	40.710
500	7.647	8.123	9.217	10.094	16.827	38.897	27.960	31.935
1000	4.071	4.360	5.035	5.597	10.094	11.822	18.652	22.758
2000	2.101	2.261	2.637	2.957	5.597	6.491	10.970	14.089
5000						2.746	4.846	6.454
10000	0.431	0.465	0.548	0.619	1.215			

SC kA	480V, 1500 kVA, 5.5%, 1804FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	32.795							
0								
10								
20	29.490	29.550	29.764	29.923	31.299	31.873	32.307	32.401
50	25.321	25.512	26.027	26.392	29.275	30.520	31.578	31.817
100	19.890	20.279	21.184	21.837	26.263	28.375	30.382	30.862
200	14.082	14.556	15.625	16.402	21.985	24.597	28.095	29.035
500	7.221	7.620	8.529	9.238	14.536	16.959	22.377	24.315
1000					9.238	10.854	16.195	18.715
2000					5.327	6.213	10.159	12.511
5000								6.127
10000	0.430	0.464	0.545	0.616	1.202			

SC kA	480V, 1500 kVA, 2.5%, 1804FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	72.126							
0								
10								
20	57.364	57.727	58.739	59.460	65.234	67.711	69.769	70.933
50	42.549	43.436	45.396	46.779	56.917	61.508	66.302	68.824
100	29.167	30.219	32.588	34.319	46.779	52.626	60.833	63.684
200	17.536	18.464	20.572	22.208	34.195	39.888	51.424	56.167
500	7.973	8.514	9.771	10.803	18.935	22.237	33.680	40.008
1000	4.158	4.467	5.192	5.805	10.803	12.582	20.765	26.177
2000					5.805	6.696	11.194	15.188
5000						2.790	4.953	6.650
10000	0.432	0.467	0.549	0.622	1.225			

SC kA	480V, 2000 kVA, 5.5%, 2406FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	43.723							
0								
10								
20	37.973	38.091	38.473	38.750	41.100	42.088	42.855	43.085
50	31.177	31.520	32.386	32.996	37.666	39.714	41.565	42.134
100	23.222	23.815	25.168	26.151	32.808	36.047	39.466	40.572
200	15.543	16.179	17.610	18.671	26.342	29.951	35.558	37.582
500	7.553	8.011	9.062	9.898	16.280	19.099	26.564	30.069
1000					5.537	9.898	11.605	18.079
2000						6.430	10.790	13.779
5000							2.736	6.396
10000	0.431	0.465	0.547	0.618	1.212			

SC kA	480V, 2000 kVA, 2.5%, 2406FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	96.150							
0								
10								
20	71.203	71.866	73.591	74.808	84.249	88.361	91.969	93.073
50	49.355	50.640	53.576	55.670	70.298	77.771	85.891	88.546
100	31.969	33.352	36.467	38.793	55.670	63.610	76.602	81.395
200	18.461	19.542	22.017	23.977	38.658	45.422	61.710	69.040
500	8.142	8.720	10.070	11.193	20.187	23.643	37.300	45.508
1000	4.203	4.521	5.274	5.914	11.193	12.981	21.938	28.176
2000	2.135	2.303	2.700	3.043	5.914	6.801	11.918	15.773
5000						2.797	5.007	6.750
10000	0.432	0.467	0.550	0.623	1.230			

SC kA	480V, 2500 kVA, 5.5%, 3007FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	54.649							
0								
10								
20	45.863	46.059	46.652	47.078	50.607	52.102	53.294	53.653
50	36.132	36.053	37.920	38.811	45.480	48.447	51.287	52.171
100	25.767	26.557	28.344	29.654	38.566	42.957	48.057	49.753
200	16.546	17.313	19.043	20.349	29.877	34.348	42.217	45.214
500	7.762	8.260	9.410	10.349	17.532	20.602	29.815	34.474
1000	4.102	4.398	5.091	5.670	10.339	12.089	19.376	23.904
2000	2.109	2.271	2.652	2.977	5.670	6.564	11.190	14.474
5000						2.758	4.885	6.524
10000	0.431	0.460	0.548	0.620	1.219			

SC kA	480V, 2500 kVA, 2.5%, 3007FLA							
					Busduct			
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	120.164							
0								
10								
20	83.111	84.138	86.690	88.485	102.093	108.097	113.360	115.365
50	54.415	56.127	59.990	62.794	82.897	92.270	104.306	108.363
100	33.869	35.515	39.233	42.060	62.794	72.489	90.516	97.550
200	19.051	20.239	22.974	25.173	41.922	49.390	68.879	79.809
500	8.246	8.847	10.256	11.439	21.016	24.541	39.759	49.433
1000	4.230	4.555	5.324	5.982	11.439	13.227	22.679	29.472
2000	2.142	2.311	2.713	3.061	5.982	6.864	12.115	16.134
5000						2.807	5.039	6.810
10000	0.433	0.468	0.551	0.624	1.233			

SC kA 480V, 500 kVA, 7.5%								
	Cable					Busduct		
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	8.018							
0								
10								
20								
50	7.481	7.413	7.533	7.563	7.784	7.868	7.938	7.959
100	6.993	7.020	7.097	7.154	7.563	7.720	7.858	7.901
200								
500								
1000								
2000								
5000								
10000	0.417	0.448	0.521	0.584	1.085			
SC kA 480V, 1000 kVA, 7.5%, 1203FLA								
	Cable					Busduct		
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	16.035							
0								
10								
20								
50	13.986	14.039	14.193	14.306	15.124	15.438	15.716	15.800
100	12.307	12.417	12.697	12.899	14.306	14.863	15.401	15.567
200	9.817	10.004	10.442	10.758	12.599	13.784	14.787	15.110
500	5.968	6.206	6.743	7.145	9.927	11.136	13.103	13.819
1000	3.562	3.759	4.209	4.563	7.145	8.247	10.841	11.964
2000						5.317	7.876	9.248
5000								
10000	0.425	0.458	0.537	0.604	1.160			
SC kA 480V, 1500 kVA, 7.5%, 1804FLA								
	Cable					Busduct		
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	24.052							
0								
10								
20	22.136	22.181	22.323	22.429	23.214	23.511	23.763	23.839
50	19.654	19.778	20.109	20.351	22.056	22.720	23.335	23.524
100	16.408	16.640	17.199	17.601	22.214	21.465	22.635	23.005
200	12.161	12.497	13.262	13.819	17.601	19.207	21.296	21.997
500	6.699	7.030	7.780	8.357	12.469	14.252	17.835	19.266
1000					8.357	9.721	13.726	15.691
2000						5.813	9.175	11.178
5000								5.824
10000	0.428	0.462	0.542	0.612	1.187			
SC kA 480V, 2000 kVA, 7.5%, 2406FLA								
	Cable					Busduct		
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	32.067							
0								
10								
20	28.725	28.808	29.058	29.243	30.594	31.108	31.554	31.690
50	24.613	24.832	25.391	25.795	28.609	29.722	30.797	31.131
100	19.632	20.007	20.883	21.514	25.795	27.565	29.370	30.217
200	13.763	14.238	15.308	16.100	21.514	23.848	27.270	28.467
500	7.124	7.518	8.418	9.127	14.289	16.492	21.680	23.926
1000					9.127	10.633	15.751	18.495
2000						6.134	9.959	12.420
5000								6.107
10000	0.429	0.464	0.545	0.615	1.201			
SC kA 480V, 2500 kVA, 7.5%, 3007FLA								
	Cable					Busduct		
	4/0	250	350	500	2@500	1200A	1600A	2000A
Feet	40.081							
0								
10								
20	34.958	35.091	35.476	35.759	37.804	38.589	39.282	39.493
50	28.968	29.303	30.127	30.721	34.813	36.453	38.105	38.623
100	22.214	22.739	23.943	24.815	30.721	33.200	36.217	37.209
200	14.919	15.515	16.850	17.801	24.815	27.836	32.752	34.452
500	7.399	7.840	8.850	9.657	15.654	18.160	24.835	27.927
1000					9.657	11.246	17.230	20.655
2000						6.318	10.478	11.276
5000						2.715	4.752	6.285
10000	0.430	0.465	0.547	0.618	1.209			