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APPENDIX 1 – HARMONIC MEASUREMENT OF NISSAN LEAF CHARGER

MODEL	CW240	T200											
VERSION	1.01												
ID	1												
LOAD	1												
WIRING	1P2W												
VAR_METHOD	OFF												
FREQUENCY	50Hz												
SAMPLING	PLL												
SOURCE	U1												
INTERVAL	2min												
U_RANGE	300V												
A_RANGE	50A	20A	20A	20A									
VT	1												
CT	1	1	1	1									
2017-11-21	15:33:36	START											
DATE	TIME	ETIME	U1_INST(V)	I1_INST(A)_1	P_INST(W)_1	I1cont(01)_INST(%)_1	I1cont(03)_INST(%)_1	I1cont(05)_INST(%)_1	I1cont(07)_INST(%)_1	I1cont(09)_INST(%)_1	TOTAL_I1_INST(A)_1	THDF_I1_INST(%)_1	
2017-11-21	17:35:36	000002:02:00	222.20	14.03	3,110.00	100.00	3.70	2.30	1.50	1.70	14.09	6.10	
2017-11-21	17:37:36	000002:04:00	223.70	13.96	3,110.00	100.00	4.00	2.50	1.40	1.60	13.97	6.40	
2017-11-21	17:39:36	000002:06:00	223.50	14.25	3,180.00	100.00	3.60	2.50	1.50	1.60	14.22	6.10	
2017-11-21	17:41:36	000002:08:00	223.80	14.46	3,220.00	100.00	3.30	2.20	1.70	1.60	14.35	5.80	
2017-11-21	17:43:36	000002:10:00	223.70	13.97	3,120.00	100.00	3.80	2.40	1.70	1.50	14.01	6.20	
2017-11-21	17:45:36	000002:12:00	225.20	13.94	3,130.00	100.00	3.40	2.50	1.80	1.50	14.00	6.10	
2017-11-21	17:47:36	000002:14:00	225.40	13.71	3,080.00	100.00	3.20	2.40	1.90	1.60	14.33	6.00	
2017-11-21	17:49:36	000002:16:00	226.20	14.24	3,210.00	100.00	3.40	2.30	1.90	1.40	14.29	5.90	
2017-11-21	17:51:36	000002:18:00	226.50	14.22	3,210.00	100.00	3.40	2.20	1.90	1.50	14.22	5.90	
2017-11-21	17:53:36	000002:20:00	227.10	14.21	3,210.00	100.00	3.40	2.20	2.00	1.50	14.22	5.90	
2017-11-21	17:55:36	000002:22:00	226.80	14.21	3,210.00	100.00	3.50	2.10	1.80	1.50	14.18	5.90	
2017-11-21	17:57:36	000002:24:00	226.60	14.24	3,210.00	100.00	3.40	2.10	1.80	1.50	14.26	5.80	
2017-11-21	17:59:36	000002:26:00	227.10	14.20	3,220.00	100.00	3.30	2.10	2.20	1.70	14.26	5.70	
2017-11-21	18:01:36	000002:28:00	227.10	14.18	3,210.00	100.00	3.40	2.20	2.10	1.60	14.22	5.80	
2017-11-21	18:03:36	000002:30:00	229.00	14.25	3,250.00	100.00	2.80	2.30	2.30	1.60	14.27	5.60	
2017-11-21	18:05:36	000002:32:00	228.10	14.14	3,210.00	100.00	3.40	2.20	2.30	1.60	14.16	5.90	
2017-11-21	18:07:36	000002:34:00	227.10	14.22	3,220.00	100.00	3.40	2.00	2.30	1.50	14.22	5.70	
2017-11-21	18:09:36	000002:36:00	227.20	14.24	3,230.00	100.00	3.30	2.00	2.30	1.50	14.20	5.70	
2017-11-21	18:11:36	000002:38:00	227.40	14.20	3,220.00	100.00	3.40	2.10	2.30	1.60	14.22	5.80	
2017-11-21	18:13:36	000002:40:00	227.00	14.23	3,220.00	100.00	3.30	2.00	2.10	1.40	14.25	5.60	
2017-11-21	18:15:36	000002:42:00	227.30	14.22	3,220.00	100.00	3.60	2.20	2.00	1.50	14.21	5.90	
2017-11-21	18:17:36	000002:44:00	225.10	14.36	3,220.00	100.00	3.40	2.00	2.00	1.50	14.38	5.60	
2017-11-21	18:19:36	000002:46:00	225.40	14.35	3,220.00	100.00	3.40	2.40	2.00	1.60	14.37	5.90	
2017-11-21	18:21:36	000002:48:00	225.10	14.36	3,220.00	100.00	3.40	1.90	2.10	1.40	14.38	5.60	
2017-11-21	18:23:36	000002:50:00	225.50	14.20	3,190.00	100.00	3.50	2.20	2.10	1.50	14.23	5.80	
2017-11-21	18:25:36	000002:52:00	225.40	14.25	3,200.00	100.00	3.50	2.20	1.90	1.50	14.24	5.80	
2017-11-21	18:27:36	000002:54:00	225.10	14.28	3,200.00	100.00	3.40	1.80	2.10	1.50	14.29	5.70	
2017-11-21	18:29:36	000002:56:00	225.00	14.37	3,220.00	100.00	3.30	2.20	2.00	1.50	14.40	5.90	
2017-11-21	18:31:36	000002:58:00	225.20	14.34	3,220.00	100.00	3.40	2.20	2.10	1.50	14.36	6.00	
2017-11-21	18:33:36	000003:00:00	225.10	14.35	3,220.00	100.00	3.30	1.80	2.30	1.70	14.33	5.80	
2017-11-21	18:35:36	000003:02:00	224.80	14.39	3,230.00	100.00	3.10	1.60	2.20	1.70	14.42	5.50	
2017-11-21	18:37:36	000003:04:00	224.70	14.40	3,230.00	100.00	3.30	2.10	2.10	1.60	14.41	5.90	
2017-11-21	18:39:36	000003:06:00	224.80	14.32	3,210.00	100.00	3.30	1.80	2.20	1.70	14.29	5.80	
2017-11-21	18:41:36	000003:08:00	224.80	14.24	3,190.00	100.00	3.40	2.00	2.20	1.70	14.25	6.00	
2017-11-21	18:43:36	000003:10:00	223.30	14.17	3,150.00	100.00	3.40	2.00	1.90	1.60	14.13	5.90	
2017-11-21	18:45:36	000003:12:00	222.80	13.99	3,110.00	100.00	3.50	2.00	2.10	1.80	14.02	6.00	
2017-11-21	18:47:36	000003:14:00	224.00	14.12	3,150.00	100.00	3.50	2.10	2.10	1.70	14.11	6.10	

APPENDIX 2 – IEEE LV TEST FEEDER DATA

Line Sections and Impedance Values

Name	phases	R1	X1	R0	X0	C1	C0	Units
2c_.007	3	3.97	0.099	3.97	0.099	0	0	Ω/km
2c_.0225	3	1.257	0.085	1.257	0.085	0	0	Ω/km
2c_16	3	1.15	0.088	1.2	0.088	0	0	Ω/km
35_SAC_XSC	3	0.868	0.092	0.76	0.092	0	0	Ω/km
4c_.06	3	0.469	0.075	1.581	0.091	0	0	Ω/km
4c_.1	3	0.274	0.073	0.959	0.079	0	0	Ω/km
4c_.35	3	0.089	0.0675	0.319	0.076	0	0	Ω/km
4c_185	3	0.166	0.068	0.58	0.078	0	0	Ω/km
4c_70	3	0.446	0.071	1.505	0.083	0	0	Ω/km
4c_95_SAC_XC	3	0.322	0.074	0.804	0.093	0	0	Ω/km

Line data

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE1	1	2	ABC	1.098	m	4c_70
LINE2	2	3	ABC	0.11511	m	4c_70
LINE3	3	4	ABC	0.10784	m	4c_70
LINE4	4	5	ABC	0.094021	m	4c_70
LINE5	5	6	ABC	0.14812	m	4c_70
LINE6	6	7	ABC	10.0863	m	4c_70
LINE7	7	8	ABC	0.45175	m	4c_70
LINE8	8	9	ABC	0.376	m	4c_70
LINE9	9	10	ABC	0.32997	m	4c_70
LINE10	10	11	ABC	0.24622	m	4c_70
LINE11	11	12	ABC	0.23114	m	4c_70
LINE12	12	13	ABC	0.14213	m	4c_70
LINE13	13	14	ABC	0.35384	m	4c_70
LINE14	14	15	ABC	2.8664	m	4c_70
LINE15	15	16	ABC	0.09654	m	2c_.007
LINE16	15	17	ABC	3.476	m	4c_70
LINE17	16	18	ABC	0.044045	m	2c_.007
LINE18	17	19	ABC	0.23917	m	4c_70
LINE19	18	20	ABC	0.046174	m	2c_.007
LINE20	19	21	ABC	0.26856	m	4c_70
LINE21	20	22	ABC	0.041976	m	2c_.007
LINE22	21	23	ABC	0.43727	m	4c_70

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE23	22	24	ABC	0.051245	m	2c_.007
LINE24	23	25	ABC	0.7955	m	4c_70
LINE25	24	26	ABC	0.055902	m	2c_.007
LINE26	25	27	ABC	5.9049	m	2c_16
LINE27	25	28	ABC	9.9686	m	4c_70
LINE28	26	29	ABC	0.054562	m	2c_.007
LINE29	27	30	ABC	1.6265	m	2c_16
LINE30	27	31	ABC	1.5847	m	2c_16
LINE31	28	32	ABC	2.6538	m	4c_70
LINE32	29	33	ABC	0.14629	m	2c_.007
LINE33	30	34	ABC	3.7248	m	2c_16
LINE34	31	35	ABC	0.053666	m	2c_16
LINE35	32	36	ABC	5.7265	m	2c_16
LINE36	32	37	ABC	8.0244	m	4c_70
LINE37	33	38	ABC	0.13648	m	2c_.007
LINE38	35	39	ABC	0.077162	m	2c_16
LINE39	36	40	ABC	0.40004	m	2c_16
LINE40	36	41	ABC	1.8063	m	2c_16
LINE41	37	42	ABC	5.5684	m	4c_70
LINE42	37	43	ABC	0.21675	m	4c_185
LINE43	38	44	ABC	0.033838	m	2c_.007
LINE44	39	45	ABC	0.098955	m	2c_16
LINE45	40	46	ABC	0.18031	m	2c_16
LINE46	41	47	ABC	4.3463	m	2c_16
LINE47	42	48	ABC	4.2078	m	4c_70
LINE48	43	49	ABC	0.10436	m	4c_185
LINE49	44	50	ABC	0.048104	m	2c_.007
LINE50	45	51	ABC	0.241	m	2c_16
LINE51	46	52	ABC	0.19109	m	2c_16
LINE52	48	53	ABC	0.60668	m	4c_70
LINE53	48	54	ABC	0.63949	m	4c_70
LINE54	49	55	ABC	0.11625	m	4c_185
LINE55	50	56	ABC	0.087664	m	2c_.007
LINE56	51	57	ABC	0.20634	m	2c_16
LINE57	52	58	ABC	0.182	m	2c_16
LINE58	53	59	ABC	2.7481	m	4c_70
LINE59	54	60	ABC	0.065368	m	4c_70
LINE60	55	61	ABC	0.10028	m	4c_185
LINE61	56	62	ABC	0.078	m	2c_.007
LINE62	57	63	ABC	0.98912	m	2c_16
LINE63	58	64	ABC	0.109	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE64	59	65	ABC	0.55868	m	4c_70
LINE65	59	66	ABC	8.2583	m	2c_16
LINE66	60	67	ABC	0.074	m	4c_70
LINE67	61	68	ABC	0.096042	m	4c_185
LINE68	62	69	ABC	0.083241	m	2c_.007
LINE69	63	70	ABC	3.4962	m	2c_16
LINE70	64	71	ABC	0.21385	m	2c_16
LINE71	65	72	ABC	6.6006	m	4c_70
LINE72	66	73	ABC	4.0366	m	2c_16
LINE73	66	74	ABC	4.0366	m	2c_16
LINE74	67	75	ABC	0.17951	m	4c_70
LINE75	68	76	ABC	0.23551	m	4c_185
LINE76	69	77	ABC	0.38907	m	2c_.007
LINE77	71	78	ABC	1.0838	m	2c_16
LINE78	72	79	ABC	2.3008	m	4c_70
LINE79	75	80	ABC	0.10362	m	4c_70
LINE80	76	81	ABC	0.7469	m	4c_185
LINE81	77	82	ABC	0.51088	m	2c_.007
LINE82	78	83	ABC	4.084	m	2c_16
LINE83	79	84	ABC	0.50211	m	4c_70
LINE84	80	85	ABC	0.11122	m	4c_70
LINE85	81	86	ABC	1.4388	m	4c_185
LINE86	82	87	ABC	0.31045	m	2c_.007
LINE87	84	88	ABC	1.0182	m	4c_70
LINE88	85	89	ABC	0.1048	m	4c_70
LINE89	86	90	ABC	0.34251	m	4c_185
LINE90	87	91	ABC	0.11206	m	2c_.007
LINE91	88	92	ABC	0.96021	m	4c_70
LINE92	90	93	ABC	0.065307	m	4c_185
LINE93	91	94	ABC	0.034785	m	2c_.007
LINE94	92	95	ABC	0.55811	m	4c_70
LINE95	93	96	ABC	0.086052	m	4c_185
LINE96	94	97	ABC	0.03677	m	2c_.007
LINE97	95	98	ABC	0.36859	m	4c_70
LINE98	96	99	ABC	0.037216	m	4c_185
LINE99	97	100	ABC	0.089588	m	2c_.007
LINE100	98	101	ABC	0.50892	m	4c_70
LINE101	99	102	ABC	5.0819	m	4c_185
LINE102	100	103	ABC	0.28583	m	2c_.007
LINE103	101	104	ABC	0.28838	m	4c_.35
LINE104	101	105	ABC	0.33602	m	4c_70

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE105	102	106	ABC	0.22108	m	4c_185
LINE106	104	107	ABC	0.3489	m	4c_.35
LINE107	105	108	ABC	0.19054	m	4c_70
LINE108	106	109	ABC	0.45085	m	4c_185
LINE109	107	110	ABC	0.4044	m	4c_.35
LINE110	108	111	ABC	7.5182	m	4c_70
LINE111	109	112	ABC	11.9766	m	4c_185
LINE112	110	113	ABC	0.61659	m	4c_.35
LINE113	111	114	ABC	0.75316	m	4c_70
LINE114	112	115	ABC	10.6613	m	4c_185
LINE115	113	116	ABC	0.79271	m	4c_.35
LINE116	114	117	ABC	1.1056	m	4c_.35
LINE117	114	118	ABC	3.6556	m	4c_.1
LINE118	115	119	ABC	0.99464	m	4c_185
LINE119	116	120	ABC	0.56909	m	4c_.35
LINE120	117	121	ABC	0.19481	m	2c_.007
LINE121	117	122	ABC	0.53831	m	4c_.35
LINE122	118	123	ABC	6.5924	m	4c_.1
LINE123	119	124	ABC	0.7248	m	4c_185
LINE124	120	125	ABC	0.80412	m	4c_.35
LINE125	121	126	ABC	0.16869	m	2c_.007
LINE126	122	127	ABC	2.5288	m	4c_.35
LINE127	123	128	ABC	2.9646	m	4c_.1
LINE128	124	129	ABC	0.62512	m	4c_185
LINE129	125	130	ABC	0.87	m	4c_.35
LINE130	126	131	ABC	0.11915	m	2c_.007
LINE131	127	132	ABC	3.8212	m	2c_16
LINE132	127	133	ABC	7.1782	m	4c_.35
LINE133	128	134	ABC	0.88205	m	4c_.1
LINE134	129	135	ABC	1.9203	m	4c_185
LINE135	130	136	ABC	0.82048	m	4c_.35
LINE136	131	137	ABC	0.18436	m	2c_.007
LINE137	132	138	ABC	0.32908	m	2c_16
LINE138	133	139	ABC	5.3402	m	4c_.35
LINE139	134	140	ABC	0.99566	m	4c_.1
LINE140	135	141	ABC	1.4127	m	4c_185
LINE141	136	142	ABC	1.349	m	4c_.35
LINE142	137	143	ABC	0.21781	m	2c_.007
LINE143	138	144	ABC	0.32289	m	2c_16
LINE144	139	145	ABC	3.5762	m	4c_.35
LINE145	140	146	ABC	0.9364	m	4c_.1

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE146	141	147	ABC	0.24053	m	4c_185
LINE147	142	148	ABC	6.4142	m	4c_.35
LINE148	143	149	ABC	0.19401	m	2c_.007
LINE149	144	150	ABC	0.26072	m	2c_16
LINE150	145	151	ABC	3.5713	m	4c_.35
LINE151	145	152	ABC	5.1314	m	2c_16
LINE152	146	153	ABC	1.0926	m	4c_.1
LINE153	147	154	ABC	0.083096	m	4c_185
LINE154	148	155	ABC	1.3973	m	4c_.35
LINE155	149	156	ABC	0.2191	m	2c_.007
LINE156	150	157	ABC	0.39132	m	2c_16
LINE157	151	158	ABC	9.4713	m	4c_.35
LINE158	152	159	ABC	0.31233	m	2c_16
LINE159	153	160	ABC	0.31439	m	4c_.1
LINE160	154	161	ABC	0.12256	m	4c_185
LINE161	155	162	ABC	11.7422	m	2c_16
LINE162	155	163	ABC	5.2844	m	4c_.35
LINE163	156	164	ABC	0.20342	m	2c_.007
LINE164	157	165	ABC	0.47178	m	2c_16
LINE165	158	166	ABC	3.2899	m	4c_.35
LINE166	159	167	ABC	0.28533	m	2c_16
LINE167	160	168	ABC	1.7861	m	4c_.1
LINE168	161	169	ABC	0.24958	m	4c_185
LINE169	162	170	ABC	2.2183	m	2c_16
LINE170	163	171	ABC	7.0156	m	4c_.35
LINE171	164	172	ABC	0.1727	m	2c_.007
LINE172	165	173	ABC	0.35642	m	2c_16
LINE173	166	174	ABC	3.9183	m	4c_.35
LINE174	166	175	ABC	4.2045	m	2c_16
LINE175	167	176	ABC	0.11853	m	2c_16
LINE176	168	177	ABC	1.0088	m	4c_.1
LINE177	170	178	ABC	4.5768	m	2c_16
LINE178	171	179	ABC	1.1818	m	4c_.35
LINE179	171	180	ABC	2.4224	m	2c_16
LINE180	172	181	ABC	0.17961	m	2c_.007
LINE181	173	182	ABC	0.41244	m	2c_16
LINE182	174	183	ABC	0.58763	m	4c_.35
LINE183	175	184	ABC	0.45409	m	2c_16
LINE184	176	185	ABC	0.25549	m	2c_16
LINE185	177	186	ABC	0.74886	m	4c_.1
LINE186	179	187	ABC	4.6507	m	4c_.35

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE187	180	188	ABC	10.0258	m	2c_16
LINE188	181	189	ABC	0.15412	m	2c_.007
LINE189	182	190	ABC	0.3878	m	2c_16
LINE190	183	191	ABC	2.3151	m	4c_.35
LINE191	183	192	ABC	0.27791	m	4c_.35
LINE192	184	193	ABC	0.43923	m	2c_16
LINE193	185	194	ABC	0.65073	m	2c_16
LINE194	186	195	ABC	0.67326	m	4c_.1
LINE195	187	196	ABC	8.3036	m	4c_.35
LINE196	188	197	ABC	1.9595	m	2c_16
LINE197	188	198	ABC	1.1325	m	2c_16
LINE198	189	199	ABC	0.19148	m	2c_.007
LINE199	190	200	ABC	0.41725	m	2c_16
LINE200	191	201	ABC	0.9314	m	4c_.35
LINE201	192	202	ABC	0.16447	m	4c_.35
LINE202	193	203	ABC	0.35134	m	2c_16
LINE203	194	204	ABC	0.38178	m	2c_16
LINE204	195	205	ABC	0.83638	m	4c_.1
LINE205	196	206	ABC	3.2475	m	2c_16
LINE206	196	207	ABC	2.1371	m	4c_.35
LINE207	197	208	ABC	4.9541	m	2c_16
LINE208	198	209	ABC	0.16008	m	2c_16
LINE209	199	210	ABC	0.44838	m	2c_.007
LINE210	200	211	ABC	0.63785	m	2c_16
LINE211	202	212	ABC	0.15526	m	4c_.35
LINE212	203	213	ABC	0.27987	m	2c_16
LINE213	204	214	ABC	0.2674	m	2c_16
LINE214	205	215	ABC	1.5434	m	4c_.1
LINE215	206	216	ABC	10.6295	m	2c_16
LINE216	207	217	ABC	3.8571	m	4c_.35
LINE217	209	218	ABC	0.1291	m	2c_16
LINE218	210	219	ABC	0.67215	m	2c_.007
LINE219	211	220	ABC	1.7419	m	2c_16
LINE220	212	221	ABC	0.17006	m	4c_.35
LINE221	213	222	ABC	0.59169	m	2c_16
LINE222	214	223	ABC	0.51437	m	2c_16
LINE223	215	224	ABC	1.3456	m	4c_.1
LINE224	216	225	ABC	4.5822	m	2c_16
LINE225	217	226	ABC	1.3772	m	4c_.35
LINE226	218	227	ABC	0.10317	m	2c_16
LINE227	220	228	ABC	0.14852	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE228	221	229	ABC	0.23273	m	4c_.35
LINE229	222	230	ABC	0.46597	m	2c_16
LINE230	223	231	ABC	0.25602	m	2c_16
LINE231	224	232	ABC	0.91534	m	4c_.1
LINE232	226	233	ABC	11.8949	m	2c_16
LINE233	226	234	ABC	1.1273	m	4c_.35
LINE234	227	235	ABC	0.15749	m	2c_16
LINE235	228	236	ABC	0.0686	m	2c_16
LINE236	229	237	ABC	0.20742	m	4c_.35
LINE237	230	238	ABC	0.32322	m	2c_16
LINE238	231	239	ABC	0.18179	m	2c_16
LINE239	232	240	ABC	0.6013	m	4c_.1
LINE240	233	241	ABC	1.7274	m	2c_16
LINE241	235	242	ABC	0.18461	m	2c_16
LINE242	236	243	ABC	0.073376	m	2c_16
LINE243	237	244	ABC	0.16881	m	4c_.35
LINE244	238	245	ABC	0.32245	m	2c_16
LINE245	239	246	ABC	2.0796	m	2c_16
LINE246	240	247	ABC	1.2941	m	4c_.1
LINE247	241	248	ABC	5.3022	m	2c_16
LINE248	241	249	ABC	5.3022	m	2c_16
LINE249	242	250	ABC	0.28355	m	2c_16
LINE250	243	251	ABC	0.070114	m	2c_16
LINE251	244	252	ABC	0.13297	m	4c_.35
LINE252	245	253	ABC	0.47173	m	2c_16
LINE253	246	254	ABC	0.61324	m	2c_16
LINE254	247	255	ABC	4.5618	m	2c_16
LINE255	247	256	ABC	0.85678	m	4c_.1
LINE256	250	257	ABC	1.0376	m	2c_16
LINE257	251	258	ABC	0.07811	m	2c_16
LINE258	252	259	ABC	0.17323	m	4c_.35
LINE259	253	260	ABC	1.7742	m	2c_16
LINE260	254	261	ABC	0.1372	m	2c_16
LINE261	255	262	ABC	0.6306	m	2c_16
LINE262	256	263	ABC	3.2128	m	4c_.1
LINE263	257	264	ABC	5.05	m	2c_16
LINE264	258	265	ABC	0.16123	m	2c_16
LINE265	259	266	ABC	0.19436	m	4c_.35
LINE266	260	267	ABC	0.4141	m	2c_16
LINE267	261	268	ABC	3.4578	m	2c_16
LINE268	261	269	ABC	0.11871	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE269	262	270	ABC	0.28991	m	2c_16
LINE270	263	271	ABC	4.2547	m	2c_16
LINE271	263	272	ABC	1.0792	m	4c_.1
LINE272	265	273	ABC	0.16792	m	2c_16
LINE273	266	274	ABC	0.17888	m	4c_.35
LINE274	267	275	ABC	0.18971	m	2c_16
LINE275	268	276	ABC	3.4268	m	2c_16
LINE276	269	277	ABC	0.13918	m	2c_16
LINE277	270	278	ABC	0.34433	m	2c_16
LINE278	271	279	ABC	0.30927	m	2c_16
LINE279	272	280	ABC	3.9121	m	4c_.1
LINE280	273	281	ABC	0.63854	m	2c_16
LINE281	274	282	ABC	0.60542	m	4c_.35
LINE282	275	283	ABC	0.12472	m	2c_16
LINE283	277	284	ABC	0.12578	m	2c_16
LINE284	278	285	ABC	0.53126	m	2c_16
LINE285	279	286	ABC	0.25491	m	2c_16
LINE286	280	287	ABC	1.7542	m	4c_.06
LINE287	280	288	ABC	0.91306	m	4c_.1
LINE288	281	289	ABC	3.3901	m	2c_16
LINE289	282	290	ABC	0.81044	m	4c_.35
LINE290	283	291	ABC	0.87618	m	2c_16
LINE291	283	292	ABC	0.10807	m	2c_16
LINE292	284	293	ABC	0.12739	m	2c_16
LINE293	285	294	ABC	0.47339	m	2c_16
LINE294	286	295	ABC	0.36208	m	2c_16
LINE295	287	296	ABC	0.80742	m	4c_.06
LINE296	288	297	ABC	3.8266	m	4c_.1
LINE297	291	298	ABC	0.40248	m	2c_16
LINE298	292	299	ABC	0.076485	m	2c_16
LINE299	293	300	ABC	0.13697	m	2c_16
LINE300	294	301	ABC	0.36805	m	2c_16
LINE301	295	302	ABC	1.6263	m	2c_16
LINE302	296	303	ABC	5.2746	m	4c_.06
LINE303	297	304	ABC	0.84468	m	4c_.1
LINE304	298	305	ABC	0.68119	m	2c_16
LINE305	299	306	ABC	0.089006	m	2c_16
LINE306	300	307	ABC	0.79435	m	2c_16
LINE307	301	308	ABC	0.45813	m	2c_16
LINE308	302	309	ABC	0.31308	m	2c_16
LINE309	303	310	ABC	0.39397	m	4c_.06

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE310	304	311	ABC	0.28067	m	4c_.1
LINE311	305	312	ABC	1.3075	m	2c_16
LINE312	306	313	ABC	0.17024	m	2c_16
LINE313	307	314	ABC	3.3598	m	2c_16
LINE314	308	315	ABC	0.47384	m	2c_16
LINE315	309	316	ABC	0.23181	m	2c_16
LINE316	310	317	ABC	0.64903	m	2c_16
LINE317	310	318	ABC	7.2163	m	4c_.06
LINE318	311	319	ABC	0.14649	m	4c_.1
LINE319	312	320	ABC	3.8495	m	2c_16
LINE320	313	321	ABC	0.6529	m	2c_16
LINE321	315	322	ABC	0.55892	m	2c_16
LINE322	316	323	ABC	0.26702	m	2c_16
LINE323	317	324	ABC	3.3427	m	2c_16
LINE324	318	325	ABC	3.4631	m	4c_.06
LINE325	319	326	ABC	0.1254	m	4c_.1
LINE326	321	327	ABC	2.2281	m	2c_16
LINE327	322	328	ABC	0.31851	m	2c_16
LINE328	323	329	ABC	0.26488	m	2c_16
LINE329	324	330	ABC	1.167	m	2c_16
LINE330	325	331	ABC	9.1332	m	2c_16
LINE331	325	332	ABC	6.6729	m	4c_.06
LINE332	326	333	ABC	0.14262	m	4c_.1
LINE333	328	334	ABC	1.4389	m	2c_16
LINE334	329	335	ABC	2.327	m	2c_16
LINE335	330	336	ABC	2.5399	m	2c_16
LINE336	331	337	ABC	3.6172	m	2c_16
LINE337	332	338	ABC	6.8067	m	2c_16
LINE338	332	339	ABC	1.2129	m	4c_.06
LINE339	333	340	ABC	0.11236	m	4c_.1
LINE340	334	341	ABC	0.55999	m	2c_16
LINE341	335	342	ABC	4.7567	m	2c_16
LINE342	336	343	ABC	2.082	m	2c_16
LINE343	336	344	ABC	0.9796	m	2c_16
LINE344	338	345	ABC	3.4221	m	2c_16
LINE345	339	346	ABC	1.0391	m	4c_.06
LINE346	340	347	ABC	0.094202	m	4c_.1
LINE347	341	348	ABC	0.19454	m	2c_16
LINE348	343	349	ABC	3.1153	m	2c_16
LINE349	344	350	ABC	0.1364	m	2c_16
LINE350	345	351	ABC	0.31846	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE351	346	352	ABC	0.73091	m	4c_.06
LINE352	347	353	ABC	0.085	m	4c_.1
LINE353	348	354	ABC	0.14656	m	2c_16
LINE354	350	355	ABC	0.14814	m	2c_16
LINE355	351	356	ABC	0.13152	m	2c_16
LINE356	352	357	ABC	0.92352	m	4c_.06
LINE357	353	358	ABC	0.070349	m	4c_.1
LINE358	354	359	ABC	0.10723	m	2c_16
LINE359	355	360	ABC	0.12976	m	2c_16
LINE360	356	361	ABC	0.092801	m	2c_16
LINE361	357	362	ABC	0.57867	m	4c_.06
LINE362	358	363	ABC	0.081609	m	4c_.1
LINE363	359	364	ABC	0.054452	m	2c_16
LINE364	360	365	ABC	0.13787	m	2c_16
LINE365	361	366	ABC	0.094921	m	2c_16
LINE366	362	367	ABC	0.88861	m	4c_.06
LINE367	363	368	ABC	0.089694	m	4c_.1
LINE368	364	369	ABC	0.080056	m	2c_16
LINE369	365	370	ABC	0.19677	m	2c_16
LINE370	366	371	ABC	0.112	m	2c_16
LINE371	367	372	ABC	0.88584	m	4c_.06
LINE372	368	373	ABC	0.48898	m	4c_.1
LINE373	369	374	ABC	0.1342	m	2c_16
LINE374	370	375	ABC	0.23921	m	2c_16
LINE375	371	376	ABC	0.14128	m	2c_16
LINE376	372	377	ABC	0.99394	m	4c_.06
LINE377	373	378	ABC	3.6848	m	4c_.1
LINE378	373	379	ABC	1.4115	m	2c_16
LINE379	374	380	ABC	0.59859	m	2c_16
LINE380	375	381	ABC	1.4827	m	2c_16
LINE381	376	382	ABC	0.12653	m	2c_16
LINE382	377	383	ABC	0.71925	m	4c_.06
LINE383	378	384	ABC	3.5292	m	4c_.1
LINE384	379	385	ABC	8.6668	m	2c_16
LINE385	379	386	ABC	1.4561	m	2c_16
LINE386	380	387	ABC	2.2004	m	2c_16
LINE387	381	388	ABC	5.0734	m	2c_16
LINE388	382	389	ABC	0.10012	m	2c_16
LINE389	383	390	ABC	0.85728	m	4c_.06
LINE390	384	391	ABC	0.15711	m	4c_.1
LINE391	385	392	ABC	3.1675	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE392	386	393	ABC	7.8335	m	2c_16
LINE393	389	394	ABC	0.17183	m	2c_16
LINE394	390	395	ABC	1.2439	m	4c_.06
LINE395	391	396	ABC	4.0601	m	2c_16
LINE396	391	397	ABC	2.8793	m	4c_.1
LINE397	392	398	ABC	0.32241	m	2c_16
LINE398	393	399	ABC	0.5688	m	2c_16
LINE399	394	400	ABC	0.59984	m	2c_16
LINE400	395	401	ABC	0.9222	m	4c_.06
LINE401	396	402	ABC	0.37201	m	2c_16
LINE402	397	403	ABC	1.3891	m	4c_.1
LINE403	398	404	ABC	0.225	m	2c_16
LINE404	399	405	ABC	0.24807	m	2c_16
LINE405	400	406	ABC	3.6672	m	2c_16
LINE406	401	407	ABC	0.88961	m	4c_.06
LINE407	402	408	ABC	0.21148	m	2c_16
LINE408	403	409	ABC	4.1907	m	4c_.1
LINE409	403	410	ABC	0.3791	m	4c_.1
LINE410	404	411	ABC	0.23308	m	2c_16
LINE411	405	412	ABC	0.16706	m	2c_16
LINE412	407	413	ABC	0.87066	m	4c_.06
LINE413	408	414	ABC	0.1436	m	2c_16
LINE414	409	415	ABC	5.9686	m	4c_.1
LINE415	410	416	ABC	0.094921	m	4c_.1
LINE416	411	417	ABC	0.9788	m	2c_16
LINE417	412	418	ABC	0.27954	m	2c_16
LINE418	413	419	ABC	1.0471	m	4c_.06
LINE419	414	420	ABC	0.23403	m	2c_16
LINE420	415	421	ABC	1.249	m	4c_.1
LINE421	416	422	ABC	0.066573	m	4c_.1
LINE422	417	423	ABC	0.239	m	2c_16
LINE423	418	424	ABC	3.1944	m	2c_16
LINE424	419	425	ABC	1.7537	m	4c_.06
LINE425	419	426	ABC	1.7537	m	4c_.06
LINE426	420	427	ABC	0.77793	m	2c_16
LINE427	421	428	ABC	0.31923	m	4c_.1
LINE428	422	429	ABC	0.082873	m	4c_.1
LINE429	423	430	ABC	0.22798	m	2c_16
LINE430	424	431	ABC	1.1331	m	2c_16
LINE431	425	432	ABC	5.9151	m	4c_.06
LINE432	425	433	ABC	5.9151	m	4c_.06

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE433	427	434	ABC	0.86608	m	2c_16
LINE434	428	435	ABC	0.16724	m	4c_.1
LINE435	429	436	ABC	0.071344	m	4c_.1
LINE436	430	437	ABC	0.22674	m	2c_16
LINE437	431	438	ABC	0.384	m	2c_16
LINE438	432	439	ABC	8.3663	m	4c_.06
LINE439	432	440	ABC	8.3663	m	4c_.06
LINE440	434	441	ABC	0.48708	m	2c_16
LINE441	435	442	ABC	0.13864	m	4c_.1
LINE442	436	443	ABC	0.078	m	4c_.1
LINE443	437	444	ABC	0.2601	m	2c_16
LINE444	438	445	ABC	0.67858	m	2c_16
LINE445	439	446	ABC	6.0033	m	4c_.06
LINE446	439	447	ABC	6.0033	m	4c_.06
LINE447	441	448	ABC	0.45756	m	2c_16
LINE448	442	449	ABC	0.11236	m	4c_.1
LINE449	443	450	ABC	0.079246	m	4c_.1
LINE450	444	451	ABC	0.89824	m	2c_16
LINE451	445	452	ABC	0.59366	m	2c_16
LINE452	446	453	ABC	1.8214	m	4c_.06
LINE453	446	454	ABC	1.8214	m	4c_.06
LINE454	448	455	ABC	0.43655	m	2c_16
LINE455	449	456	ABC	0.17175	m	4c_.1
LINE456	450	457	ABC	0.054231	m	4c_.1
LINE457	451	458	ABC	4.3773	m	2c_16
LINE458	452	459	ABC	0.67064	m	2c_16
LINE459	453	460	ABC	5.3905	m	4c_.06
LINE460	453	461	ABC	5.3905	m	4c_.06
LINE461	453	462	ABC	3.6859	m	2c_16
LINE462	455	463	ABC	0.71675	m	2c_16
LINE463	456	464	ABC	0.15483	m	4c_.1
LINE464	457	465	ABC	0.040311	m	4c_.1
LINE465	459	466	ABC	0.63421	m	2c_16
LINE466	460	467	ABC	5.9891	m	4c_.06
LINE467	460	468	ABC	5.9891	m	4c_.06
LINE468	460	469	ABC	0.88292	m	4c_.06
LINE469	462	470	ABC	0.53828	m	2c_16
LINE470	463	471	ABC	0.49923	m	2c_16
LINE471	464	472	ABC	0.14736	m	4c_.1
LINE472	465	473	ABC	0.049497	m	4c_.1
LINE473	466	474	ABC	3.201	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE474	467	475	ABC	2.1947	m	4c_.06
LINE475	467	476	ABC	2.1947	m	4c_.06
LINE476	470	477	ABC	0.29351	m	2c_16
LINE477	471	478	ABC	0.35077	m	2c_16
LINE478	472	479	ABC	0.16601	m	4c_.1
LINE479	473	480	ABC	0.063953	m	4c_.1
LINE480	474	481	ABC	0.18984	m	2c_16
LINE481	475	482	ABC	4.6432	m	4c_.06
LINE482	475	483	ABC	4.6432	m	4c_.06
LINE483	475	484	ABC	10.2769	m	2c_16
LINE484	477	485	ABC	0.19883	m	2c_16
LINE485	478	486	ABC	0.1676	m	2c_16
LINE486	479	487	ABC	0.17536	m	4c_.1
LINE487	480	488	ABC	0.11163	m	4c_.1
LINE488	481	489	ABC	0.1713	m	2c_16
LINE489	482	490	ABC	6.6548	m	4c_.06
LINE490	482	491	ABC	6.6548	m	4c_.06
LINE491	484	492	ABC	0.57796	m	2c_16
LINE492	484	493	ABC	4.0726	m	2c_16
LINE493	485	494	ABC	0.30201	m	2c_16
LINE494	486	495	ABC	0.10617	m	2c_16
LINE495	487	496	ABC	0.38342	m	4c_.1
LINE496	488	497	ABC	0.13972	m	4c_.1
LINE497	489	498	ABC	0.23283	m	2c_16
LINE498	490	499	ABC	4.0612	m	4c_.06
LINE499	490	500	ABC	4.0612	m	4c_.06
LINE500	492	501	ABC	0.24429	m	2c_16
LINE501	493	502	ABC	2.606	m	2c_16
LINE502	494	503	ABC	0.45833	m	2c_16
LINE503	495	504	ABC	0.071784	m	2c_16
LINE504	496	505	ABC	8.6961	m	4c_.1
LINE505	497	506	ABC	0.096167	m	4c_.1
LINE506	498	507	ABC	0.30564	m	2c_16
LINE507	499	508	ABC	0.69938	m	4c_.06
LINE508	499	509	ABC	0.69938	m	4c_.06
LINE509	501	510	ABC	0.14354	m	2c_16
LINE510	503	511	ABC	0.32517	m	2c_16
LINE511	504	512	ABC	0.10013	m	2c_16
LINE512	505	513	ABC	5.5648	m	2c_16
LINE513	505	514	ABC	1.3369	m	4c_.1
LINE514	506	515	ABC	0.085492	m	4c_.1

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE515	508	516	ABC	1.8857	m	4c_.06
LINE516	508	517	ABC	1.8857	m	4c_.06
LINE517	508	518	ABC	4.7316	m	2c_16
LINE518	510	519	ABC	0.1321	m	2c_16
LINE519	511	520	ABC	0.22216	m	2c_16
LINE520	512	521	ABC	0.07642	m	2c_16
LINE521	513	522	ABC	4.9074	m	2c_16
LINE522	514	523	ABC	0.72122	m	4c_.1
LINE523	515	524	ABC	0.066573	m	4c_.1
LINE524	516	525	ABC	1.3881	m	4c_.06
LINE525	516	526	ABC	1.3881	m	4c_.06
LINE526	518	527	ABC	2.796	m	2c_16
LINE527	519	528	ABC	0.11769	m	2c_16
LINE528	520	529	ABC	0.17555	m	2c_16
LINE529	521	530	ABC	0.54535	m	2c_16
LINE530	523	531	ABC	0.10771	m	4c_.1
LINE531	524	532	ABC	0.060803	m	4c_.1
LINE532	525	533	ABC	1.8899	m	4c_.06
LINE533	525	534	ABC	1.8899	m	4c_.06
LINE534	527	535	ABC	2.2154	m	2c_16
LINE535	528	536	ABC	0.12209	m	2c_16
LINE536	529	537	ABC	0.56286	m	2c_16
LINE537	530	538	ABC	1.9227	m	2c_16
LINE538	530	539	ABC	5.5837	m	2c_16
LINE539	531	540	ABC	0.082219	m	4c_.1
LINE540	532	541	ABC	0.065513	m	4c_.1
LINE541	533	542	ABC	1.3374	m	4c_.06
LINE542	533	543	ABC	1.3374	m	4c_.06
LINE543	535	544	ABC	0.91542	m	2c_16
LINE544	536	545	ABC	0.36857	m	2c_16
LINE545	537	546	ABC	4.5527	m	2c_16
LINE546	538	547	ABC	2.1231	m	2c_16
LINE547	540	548	ABC	0.076896	m	4c_.1
LINE548	541	549	ABC	0.086145	m	4c_.1
LINE549	542	550	ABC	3.7401	m	4c_.06
LINE550	542	551	ABC	3.7401	m	4c_.06
LINE551	544	552	ABC	0.28804	m	2c_16
LINE552	544	553	ABC	3.789	m	2c_16
LINE553	545	554	ABC	0.37143	m	2c_16
LINE554	546	555	ABC	0.22672	m	2c_16
LINE555	547	556	ABC	5.7548	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE556	548	557	ABC	0.082	m	4c_.1
LINE557	549	558	ABC	0.061612	m	4c_.1
LINE558	550	559	ABC	2.7082	m	4c_.06
LINE559	550	560	ABC	2.7082	m	4c_.06
LINE560	552	561	ABC	0.10599	m	2c_16
LINE561	553	562	ABC	2.8664	m	2c_16
LINE562	554	563	ABC	3.4705	m	2c_16
LINE563	555	564	ABC	0.17889	m	2c_16
LINE564	557	565	ABC	0.07256	m	4c_.1
LINE565	558	566	ABC	0.12021	m	4c_.1
LINE566	559	567	ABC	0.60068	m	4c_.06
LINE567	559	568	ABC	0.60068	m	4c_.06
LINE568	559	569	ABC	3.8482	m	2c_16
LINE569	561	570	ABC	0.15788	m	2c_16
LINE570	564	571	ABC	0.20224	m	2c_16
LINE571	565	572	ABC	0.074216	m	4c_.1
LINE572	567	573	ABC	0.14223	m	4c_.06
LINE573	567	574	ABC	0.14223	m	4c_.06
LINE574	569	575	ABC	0.48648	m	2c_16
LINE575	570	576	ABC	0.095	m	2c_16
LINE576	571	577	ABC	0.18	m	2c_16
LINE577	572	578	ABC	0.38305	m	4c_.1
LINE578	573	579	ABC	3.8558	m	4c_.06
LINE579	573	580	ABC	3.8558	m	4c_.06
LINE580	573	581	ABC	0.31979	m	4c_.06
LINE581	575	582	ABC	0.35899	m	2c_16
LINE582	576	583	ABC	0.11463	m	2c_16
LINE583	577	584	ABC	0.20718	m	2c_16
LINE584	578	585	ABC	4.7318	m	2c_16
LINE585	578	586	ABC	0.82623	m	4c_.1
LINE586	579	587	ABC	2.7022	m	4c_.06
LINE587	579	588	ABC	2.7022	m	4c_.06
LINE588	581	589	ABC	0.11628	m	4c_.06
LINE589	582	590	ABC	0.3493	m	2c_16
LINE590	583	591	ABC	0.10065	m	2c_16
LINE591	584	592	ABC	0.21243	m	2c_16
LINE592	585	593	ABC	0.27268	m	2c_16
LINE593	586	594	ABC	3.9483	m	4c_.1
LINE594	587	595	ABC	5.4142	m	4c_.06
LINE595	587	596	ABC	0.64238	m	4c_.06
LINE596	589	597	ABC	0.089275	m	4c_.06

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE597	590	598	ABC	3.2812	m	2c_16
LINE598	591	599	ABC	0.65862	m	2c_16
LINE599	592	600	ABC	0.25534	m	2c_16
LINE600	593	601	ABC	0.13695	m	2c_16
LINE601	594	602	ABC	9.1669	m	2c_16
LINE602	594	603	ABC	4.6424	m	4c_.1
LINE603	595	604	ABC	4.8283	m	4c_.06
LINE604	595	605	ABC	4.8283	m	4c_.06
LINE605	595	606	ABC	4.7719	m	4c_.06
LINE606	596	607	ABC	11.6642	m	2c_16
LINE607	596	608	ABC	11.6642	m	2c_16
LINE608	597	609	ABC	0.11037	m	4c_.06
LINE609	598	610	ABC	1.5271	m	2c_16
LINE610	599	611	ABC	4.8562	m	2c_16
LINE611	600	612	ABC	0.16008	m	2c_16
LINE612	601	613	ABC	0.11484	m	2c_16
LINE613	602	614	ABC	4.8374	m	2c_16
LINE614	603	615	ABC	4.4466	m	4c_.1
LINE615	604	616	ABC	3.9301	m	2c_.0225
LINE616	604	617	ABC	3.1088	m	4c_.06
LINE617	604	618	ABC	3.1088	m	4c_.06
LINE618	607	619	ABC	2.7454	m	2c_16
LINE619	609	620	ABC	0.06364	m	4c_.06
LINE620	610	621	ABC	0.71673	m	2c_16
LINE621	612	622	ABC	0.68797	m	2c_16
LINE622	613	623	ABC	0.093648	m	2c_16
LINE623	615	624	ABC	1.6322	m	2c_16
LINE624	615	625	ABC	1.2511	m	4c_.1
LINE625	616	626	ABC	5.3537	m	2c_.0225
LINE626	620	627	ABC	0.077897	m	4c_.06
LINE627	621	628	ABC	0.47807	m	2c_16
LINE628	622	629	ABC	2.9004	m	2c_16
LINE629	623	630	ABC	0.147	m	2c_16
LINE630	624	631	ABC	0.40022	m	2c_16
LINE631	625	632	ABC	0.28784	m	4c_.1
LINE632	626	633	ABC	1.5703	m	2c_.0225
LINE633	627	634	ABC	0.065299	m	4c_.06
LINE634	628	635	ABC	0.73088	m	2c_16
LINE635	630	636	ABC	0.35053	m	2c_16
LINE636	631	637	ABC	0.27482	m	2c_16
LINE637	632	638	ABC	0.14284	m	4c_.1

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE638	633	639	ABC	5.1974	m	2c_.0225
LINE639	634	640	ABC	0.069123	m	4c_.06
LINE640	635	641	ABC	1.4274	m	2c_16
LINE641	636	642	ABC	0.24251	m	2c_16
LINE642	637	643	ABC	0.38096	m	2c_16
LINE643	638	644	ABC	0.15697	m	4c_.1
LINE644	640	645	ABC	0.068593	m	4c_.06
LINE645	641	646	ABC	0.39457	m	2c_16
LINE646	642	647	ABC	0.30835	m	2c_16
LINE647	643	648	ABC	0.90337	m	2c_16
LINE648	644	649	ABC	0.18112	m	4c_.1
LINE649	645	650	ABC	0.093984	m	4c_.06
LINE650	646	651	ABC	0.11455	m	2c_16
LINE651	647	652	ABC	0.18732	m	2c_16
LINE652	648	653	ABC	0.68671	m	2c_16
LINE653	649	654	ABC	0.1831	m	4c_.1
LINE654	650	655	ABC	0.12394	m	4c_.06
LINE655	651	656	ABC	0.099368	m	2c_16
LINE656	651	657	ABC	0.52781	m	2c_16
LINE657	652	658	ABC	0.16911	m	2c_16
LINE658	653	659	ABC	0.48206	m	2c_16
LINE659	654	660	ABC	0.20299	m	4c_.1
LINE660	655	661	ABC	0.36466	m	4c_.06
LINE661	656	662	ABC	0.093	m	2c_16
LINE662	657	663	ABC	0.69648	m	2c_16
LINE663	658	664	ABC	0.28521	m	2c_16
LINE664	659	665	ABC	0.505	m	2c_16
LINE665	660	666	ABC	0.29519	m	4c_.1
LINE666	661	667	ABC	0.26019	m	4c_.06
LINE667	662	668	ABC	0.095802	m	2c_16
LINE668	663	669	ABC	2.8935	m	2c_16
LINE669	664	670	ABC	0.2804	m	2c_16
LINE670	665	671	ABC	0.41461	m	2c_16
LINE671	666	672	ABC	0.4801	m	2c_16
LINE672	666	673	ABC	0.81161	m	4c_.1
LINE673	667	674	ABC	0.20184	m	4c_.06
LINE674	668	675	ABC	0.69267	m	2c_16
LINE675	669	676	ABC	1.2288	m	2c_16
LINE676	670	677	ABC	0.13267	m	2c_16
LINE677	671	678	ABC	0.68648	m	2c_16
LINE678	672	679	ABC	0.2883	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE679	673	680	ABC	5.1393	m	4c_.1
LINE680	674	681	ABC	0.40252	m	4c_.06
LINE681	675	682	ABC	5.0441	m	2c_16
LINE682	677	683	ABC	0.14572	m	2c_16
LINE683	678	684	ABC	2.2185	m	2c_16
LINE684	679	685	ABC	0.26744	m	2c_16
LINE685	680	686	ABC	3.6787	m	4c_.1
LINE686	683	687	ABC	0.13986	m	2c_16
LINE687	684	688	ABC	5.1838	m	2c_16
LINE688	685	689	ABC	0.26095	m	2c_16
LINE689	686	690	ABC	8.1445	m	2c_16
LINE690	686	691	ABC	10.5254	m	4c_.1
LINE691	687	692	ABC	0.16867	m	2c_16
LINE692	689	693	ABC	0.19573	m	2c_16
LINE693	690	694	ABC	0.76157	m	2c_16
LINE694	690	695	ABC	2.1261	m	2c_16
LINE695	691	696	ABC	9.4817	m	2c_16
LINE696	691	697	ABC	2.1907	m	4c_.1
LINE697	692	698	ABC	0.26905	m	2c_16
LINE698	693	699	ABC	0.31093	m	2c_16
LINE699	694	700	ABC	0.2383	m	2c_16
LINE700	695	701	ABC	4.3312	m	2c_16
LINE701	696	702	ABC	5.493	m	2c_16
LINE702	697	703	ABC	2.4	m	4c_.06
LINE703	698	704	ABC	0.73636	m	2c_16
LINE704	699	705	ABC	0.52424	m	2c_16
LINE705	700	706	ABC	0.15322	m	2c_16
LINE706	703	707	ABC	6.3308	m	4c_.06
LINE707	703	708	ABC	0.11132	m	4c_.06
LINE708	704	709	ABC	0.97996	m	2c_16
LINE709	705	710	ABC	3.9281	m	2c_16
LINE710	706	711	ABC	0.092418	m	2c_16
LINE711	707	712	ABC	7.5025	m	4c_.06
LINE712	707	713	ABC	3.9448	m	2c_16
LINE713	708	714	ABC	0.10474	m	4c_.06
LINE714	709	715	ABC	0.093338	m	2c_16
LINE715	710	716	ABC	3.2225	m	2c_16
LINE716	711	717	ABC	0.093408	m	2c_16
LINE717	712	718	ABC	7.7434	m	4c_.06
LINE718	713	719	ABC	0.4223	m	2c_16
LINE719	714	720	ABC	0.097	m	4c_.06

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE720	715	721	ABC	0.073817	m	2c_16
LINE721	716	722	ABC	1.021	m	2c_16
LINE722	717	723	ABC	0.083433	m	2c_16
LINE723	718	724	ABC	3.2535	m	4c_.06
LINE724	718	725	ABC	9.3475	m	2c_16
LINE725	719	726	ABC	0.16124	m	2c_16
LINE726	720	727	ABC	0.10977	m	4c_.06
LINE727	721	728	ABC	0.071694	m	2c_16
LINE728	722	729	ABC	0.92949	m	2c_16
LINE729	723	730	ABC	0.094	m	2c_16
LINE730	724	731	ABC	4.421	m	4c_.06
LINE731	725	732	ABC	1.2539	m	2c_16
LINE732	726	733	ABC	0.17056	m	2c_16
LINE733	727	734	ABC	0.089889	m	4c_.06
LINE734	728	735	ABC	0.076792	m	2c_16
LINE735	729	736	ABC	0.50625	m	2c_16
LINE736	730	737	ABC	0.075313	m	2c_16
LINE737	731	738	ABC	5.1761	m	4c_.06
LINE738	732	739	ABC	0.65877	m	2c_16
LINE739	733	740	ABC	0.14155	m	2c_16
LINE740	734	741	ABC	0.13761	m	4c_.06
LINE741	735	742	ABC	0.071	m	2c_16
LINE742	736	743	ABC	0.40432	m	2c_16
LINE743	737	744	ABC	0.090338	m	2c_16
LINE744	738	745	ABC	4.1562	m	4c_.06
LINE745	739	746	ABC	3.7387	m	2c_16
LINE746	739	747	ABC	0.12202	m	2c_16
LINE747	740	748	ABC	0.16763	m	2c_16
LINE748	741	749	ABC	0.16427	m	4c_.06
LINE749	742	750	ABC	0.06691	m	2c_16
LINE750	743	751	ABC	0.34477	m	2c_16
LINE751	744	752	ABC	0.09735	m	2c_16
LINE752	745	753	ABC	1.5434	m	4c_.06
LINE753	745	754	ABC	5.9227	m	2c_16
LINE754	746	755	ABC	3.0391	m	2c_16
LINE755	747	756	ABC	0.088238	m	2c_16
LINE756	748	757	ABC	0.16348	m	2c_16
LINE757	749	758	ABC	0.12454	m	4c_.06
LINE758	750	759	ABC	0.093059	m	2c_16
LINE759	751	760	ABC	0.40459	m	2c_16
LINE760	752	761	ABC	0.17761	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE761	753	762	ABC	2.1279	m	4c_.06
LINE762	754	763	ABC	4.9506	m	2c_16
LINE763	756	764	ABC	0.074465	m	2c_16
LINE764	757	765	ABC	0.22475	m	2c_16
LINE765	758	766	ABC	0.12167	m	4c_.06
LINE766	759	767	ABC	0.11404	m	2c_16
LINE767	760	768	ABC	0.36969	m	2c_16
LINE768	761	769	ABC	1.3288	m	2c_16
LINE769	762	770	ABC	5.2347	m	4c_.06
LINE770	763	771	ABC	3.6007	m	2c_16
LINE771	763	772	ABC	0.13038	m	2c_16
LINE772	764	773	ABC	0.12578	m	2c_16
LINE773	765	774	ABC	0.30918	m	2c_16
LINE774	766	775	ABC	0.07931	m	4c_.06
LINE775	767	776	ABC	0.54052	m	2c_16
LINE776	768	777	ABC	0.57353	m	2c_16
LINE777	769	778	ABC	4.0721	m	2c_16
LINE778	770	779	ABC	4.2428	m	4c_.06
LINE779	771	780	ABC	3.5283	m	2c_16
LINE780	772	781	ABC	0.12466	m	2c_16
LINE781	773	782	ABC	0.17614	m	2c_16
LINE782	774	783	ABC	0.3272	m	2c_16
LINE783	775	784	ABC	0.097	m	4c_.06
LINE784	776	785	ABC	4.6216	m	2c_16
LINE785	777	786	ABC	1.1579	m	2c_16
LINE786	779	787	ABC	3.3152	m	4c_.06
LINE787	781	788	ABC	0.13439	m	2c_16
LINE788	782	789	ABC	0.1307	m	2c_16
LINE789	783	790	ABC	0.21735	m	2c_16
LINE790	784	791	ABC	0.091984	m	4c_.06
LINE791	786	792	ABC	0.34588	m	2c_16
LINE792	786	793	ABC	2.062	m	2c_16
LINE793	787	794	ABC	2.9963	m	4c_.06
LINE794	788	795	ABC	0.12	m	2c_16
LINE795	789	796	ABC	0.21651	m	2c_16
LINE796	790	797	ABC	0.22121	m	2c_16
LINE797	791	798	ABC	0.091706	m	4c_.06
LINE798	792	799	ABC	0.30164	m	2c_16
LINE799	793	800	ABC	3.2995	m	2c_16
LINE800	794	801	ABC	0.20555	m	2c_16
LINE801	794	802	ABC	2.8031	m	4c_95_SAC_XC

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE802	795	803	ABC	0.13252	m	2c_16
LINE803	796	804	ABC	1.5028	m	2c_16
LINE804	797	805	ABC	0.10577	m	2c_16
LINE805	798	806	ABC	0.12311	m	4c_.06
LINE806	799	807	ABC	0.24947	m	2c_16
LINE807	800	808	ABC	2.8191	m	2c_16
LINE808	801	809	ABC	0.20609	m	2c_16
LINE809	802	810	ABC	3.0749	m	4c_.06
LINE810	802	811	ABC	3.0749	m	4c_.06
LINE811	803	812	ABC	0.08544	m	2c_16
LINE812	804	813	ABC	3.3195	m	2c_16
LINE813	805	814	ABC	0.16824	m	2c_16
LINE814	806	815	ABC	0.42086	m	4c_.06
LINE815	807	816	ABC	0.194	m	2c_16
LINE816	808	817	ABC	1.5955	m	2c_16
LINE817	809	818	ABC	0.20649	m	2c_16
LINE818	810	819	ABC	2.5782	m	4c_.06
LINE819	810	820	ABC	2.5782	m	4c_.06
LINE820	812	821	ABC	0.13123	m	2c_16
LINE821	814	822	ABC	0.15794	m	2c_16
LINE822	815	823	ABC	0.48651	m	4c_.06
LINE823	816	824	ABC	0.19731	m	2c_16
LINE824	818	825	ABC	0.20524	m	2c_16
LINE825	819	826	ABC	2.7715	m	4c_.06
LINE826	819	827	ABC	2.7715	m	4c_.06
LINE827	821	828	ABC	1.0794	m	2c_16
LINE828	822	829	ABC	0.22567	m	2c_16
LINE829	823	830	ABC	0.49659	m	4c_.06
LINE830	824	831	ABC	0.17123	m	2c_16
LINE831	825	832	ABC	0.20602	m	2c_16
LINE832	826	833	ABC	2.2755	m	4c_.06
LINE833	826	834	ABC	2.2755	m	4c_.06
LINE834	828	835	ABC	3.7201	m	2c_16
LINE835	829	836	ABC	2.3821	m	2c_16
LINE836	831	837	ABC	0.12298	m	2c_16
LINE837	832	838	ABC	0.20588	m	2c_16
LINE838	833	839	ABC	2.443	m	4c_.06
LINE839	833	840	ABC	2.443	m	4c_.06
LINE840	836	841	ABC	0.95278	m	2c_16
LINE841	837	842	ABC	0.14278	m	2c_16
LINE842	838	843	ABC	0.20601	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE843	839	844	ABC	4.8092	m	2c_.0225
LINE844	839	845	ABC	3.6212	m	4c_.06
LINE845	839	846	ABC	3.6212	m	4c_.06
LINE846	841	847	ABC	0.48382	m	2c_16
LINE847	842	848	ABC	0.2151	m	2c_16
LINE848	843	849	ABC	0.10056	m	2c_16
LINE849	844	850	ABC	0.7036	m	2c_.0225
LINE850	845	851	ABC	4.364	m	4c_.06
LINE851	845	852	ABC	4.364	m	4c_.06
LINE852	847	853	ABC	0.10706	m	2c_16
LINE853	848	854	ABC	0.35143	m	2c_16
LINE854	849	855	ABC	2.2601	m	2c_16
LINE855	850	856	ABC	1.9822	m	2c_.0225
LINE856	851	857	ABC	6.8621	m	4c_.06
LINE857	851	858	ABC	6.8621	m	4c_.06
LINE858	853	859	ABC	0.084315	m	2c_16
LINE859	854	860	ABC	2.82	m	2c_16
LINE860	854	861	ABC	7.5091	m	2c_16
LINE861	855	862	ABC	1.4697	m	2c_16
LINE862	856	863	ABC	2.3276	m	2c_.0225
LINE863	857	864	ABC	2.7888	m	4c_.06
LINE864	857	865	ABC	2.7888	m	4c_.06
LINE865	859	866	ABC	0.090338	m	2c_16
LINE866	862	867	ABC	1.2854	m	2c_16
LINE867	863	868	ABC	0.30194	m	2c_.0225
LINE868	864	869	ABC	1.7373	m	4c_.06
LINE869	864	870	ABC	1.7373	m	4c_.06
LINE870	866	871	ABC	0.072277	m	2c_16
LINE871	867	872	ABC	1.3483	m	2c_16
LINE872	868	873	ABC	0.37952	m	2c_.0225
LINE873	868	874	ABC	0.84439	m	2c_.0225
LINE874	869	875	ABC	1.2	m	4c_.06
LINE875	869	876	ABC	1.2	m	4c_.06
LINE876	871	877	ABC	0.070178	m	2c_16
LINE877	872	878	ABC	2.3022	m	2c_16
LINE878	873	879	ABC	0.35118	m	2c_.0225
LINE879	874	880	ABC	1.9761	m	2c_.0225
LINE880	875	881	ABC	1.0112	m	4c_.06
LINE881	875	882	ABC	1.0112	m	4c_.06
LINE882	877	883	ABC	0.07	m	2c_16
LINE883	878	884	ABC	0.56468	m	2c_16

Name	Bus1	Bus2	Phases	Length	Units	LineCode
LINE884	879	885	ABC	0.534	m	2c_.0225
LINE885	880	886	ABC	4.6879	m	2c_.0225
LINE886	883	887	ABC	0.069181	m	2c_16
LINE887	884	888	ABC	0.62293	m	2c_16
LINE888	884	889	ABC	3.1574	m	35_SAC_XSC
LINE889	885	890	ABC	0.67483	m	2c_.0225
LINE890	887	891	ABC	1.2371	m	2c_16
LINE891	888	892	ABC	1.0228	m	2c_16
LINE892	889	893	ABC	2.6779	m	35_SAC_XSC
LINE893	890	894	ABC	2.6271	m	2c_.0225
LINE894	891	895	ABC	5.8249	m	2c_16
LINE895	891	896	ABC	3.2587	m	2c_16
LINE896	892	897	ABC	0.20223	m	2c_16
LINE897	893	898	ABC	4.501	m	35_SAC_XSC
LINE898	894	899	ABC	4.7723	m	2c_.0225
LINE899	895	900	ABC	3.8684	m	2c_16
LINE900	897	901	ABC	0.17088	m	2c_16
LINE901	901	902	ABC	0.144	m	2c_16
LINE902	902	903	ABC	0.18732	m	2c_16
LINE903	903	904	ABC	0.33902	m	2c_16
LINE904	904	905	ABC	0.5878	m	2c_16
LINE905	905	906	ABC	4.8147	m	2c_16

Load Data

Note: All the loads are single phase and constant PQ. The actual capacity will be taken by multiplying the kW value with the corresponding multiplier.

Name	Bus	phases	kV	Connection	kW	PF	Yearly
LOAD1	34	A	0.23	wye	1	0.95	Shape_1
LOAD2	47	B	0.23	wye	1	0.95	Shape_2
LOAD3	70	A	0.23	wye	1	0.95	Shape_3
LOAD4	73	A	0.23	wye	1	0.95	Shape_4
LOAD5	74	A	0.23	wye	1	0.95	Shape_5
LOAD6	83	B	0.23	wye	1	0.95	Shape_6
LOAD7	178	B	0.23	wye	1	0.95	Shape_7
LOAD8	208	C	0.23	wye	1	0.95	Shape_8
LOAD9	225	A	0.23	wye	1	0.95	Shape_9
LOAD10	248	B	0.23	wye	1	0.95	Shape_10
LOAD11	249	B	0.23	wye	1	0.95	Shape_11
LOAD12	264	C	0.23	wye	1	0.95	Shape_12
LOAD13	276	B	0.23	wye	1	0.95	Shape_13

LOAD14	289	A	0.23	wye	1	0.95	Shape_14
LOAD15	314	B	0.23	wye	1	0.95	Shape_15
LOAD16	320	C	0.23	wye	1	0.95	Shape_16
LOAD17	327	C	0.23	wye	1	0.95	Shape_17
LOAD18	337	C	0.23	wye	1	0.95	Shape_18
LOAD19	342	C	0.23	wye	1	0.95	Shape_19
LOAD20	349	A	0.23	wye	1	0.95	Shape_20
LOAD21	387	A	0.23	wye	1	0.95	Shape_21
LOAD22	388	A	0.23	wye	1	0.95	Shape_22
LOAD23	406	B	0.23	wye	1	0.95	Shape_23
LOAD24	458	C	0.23	wye	1	0.95	Shape_24
LOAD25	502	A	0.23	wye	1	0.95	Shape_25
LOAD26	522	B	0.23	wye	1	0.95	Shape_26
LOAD27	539	C	0.23	wye	1	0.95	Shape_27
LOAD28	556	C	0.23	wye	1	0.95	Shape_28
LOAD29	562	A	0.23	wye	1	0.95	Shape_29
LOAD30	563	A	0.23	wye	1	0.95	Shape_30
LOAD31	611	A	0.23	wye	1	0.95	Shape_31
LOAD32	614	C	0.23	wye	1	0.95	Shape_32
LOAD33	619	C	0.23	wye	1	0.95	Shape_33
LOAD34	629	A	0.23	wye	1	0.95	Shape_34
LOAD35	639	B	0.23	wye	1	0.95	Shape_35
LOAD36	676	B	0.23	wye	1	0.95	Shape_36
LOAD37	682	B	0.23	wye	1	0.95	Shape_37
LOAD38	688	B	0.23	wye	1	0.95	Shape_38
LOAD39	701	C	0.23	wye	1	0.95	Shape_39
LOAD40	702	B	0.23	wye	1	0.95	Shape_40
LOAD41	755	B	0.23	wye	1	0.95	Shape_41
LOAD42	778	C	0.23	wye	1	0.95	Shape_42
LOAD43	780	C	0.23	wye	1	0.95	Shape_43
LOAD44	785	B	0.23	wye	1	0.95	Shape_44
LOAD45	813	B	0.23	wye	1	0.95	Shape_45
LOAD46	817	A	0.23	wye	1	0.95	Shape_46
LOAD47	835	C	0.23	wye	1	0.95	Shape_47
LOAD48	860	A	0.23	wye	1	0.95	Shape_48
LOAD49	861	A	0.23	wye	1	0.95	Shape_49
LOAD50	886	B	0.23	wye	1	0.95	Shape_50
LOAD51	896	A	0.23	wye	1	0.95	Shape_51
LOAD52	898	A	0.23	wye	1	0.95	Shape_52
LOAD53	899	B	0.23	wye	1	0.95	Shape_53
LOAD54	900	A	0.23	wye	1	0.95	Shape_54
LOAD55	906	A	0.23	wye	1	0.95	Shape_55