

C.L.I. Group, LLC Power Quality Analysis

File Name: C:\CLIIAQ-1\SN23961.PWV
 Logger Serial Number:23961
 Site Description: CLI Power Quality Sample
 Mode: 110V 60Hz Overwrite Oldest Events When Full
 179 Events Recorded: from 11/6/2009 03:42:48 AM to 1/17/2010 09:17:44 AM.

Hot to Neutral Thresholds:
 Surge Voltage (Vrms): 128
 Sag Voltage (Vrms): 105
 Impulse Deviation (V):200

Neutral to Ground Thresholds:
 Surge Voltage (Vrms): 10
 Impulse Deviation (V):100

Line Frequency (Hz) : 60.0625651720542
 Line Voltage (Vrms): 122
 Ground Voltage (Vrms): 0

Frequency Thresholds:
 Minimum (Hz):58.8
 Maximum (Hz):61.2

Event #	Start Time	Event	Extreme	End time/Duration/Degree
179	1/16/2010 09:17:36 AM	N-G Surge	22 Vrms	1.0 cycles
178	1/13/2010 02:11:44 PM	Outage	0 Vrms	00:00:24
177	1/11/2010 12:17:36 PM	Outage	0 Vrms	00:30:00
176	1/7/2010 04:56:56 PM	N-G Surge	22 Vrms	2.0 cycles
175	1/7/2010 04:45:04 PM	N-G Surge	23 Vrms	1.0 cycles
174	12/29/2009 07:14:32 AM	Outage	0 Vrms	18:25:36
173	12/29/2009 07:09:28 AM	Outage	0 Vrms	00:01:12
172	12/24/2009 11:18:16 AM	N-G Surge	11 Vrms	1.0 cycles
171	12/20/2009 07:43:36 PM	Outage	0 Vrms	12/24/2009 02:56:40 AM
170	12/20/2009 07:43:36 PM	1 N-G Impulse	+240 Vp	126°
169	12/13/2009 06:08:32 AM	H-N Sag	65 Vrms	1.5 cycles
168	12/11/2009 09:40:24 AM	Outage	0 Vrms	00:00:48
167	12/11/2009 09:40:24 AM	1 N-G Impulse	+230 Vp	114°
166	12/10/2009 11:22:32 AM	N-G Surge	23 Vrms	1.0 cycles
165	12/10/2009 11:01:04 AM	N-G Surge	15 Vrms	1.0 cycles
164	12/9/2009 08:52:40 PM	H-N Sag	104 Vrms	1.0 cycles
163	12/9/2009 04:30:16 PM	Outage	0 Vrms	02:07:52
162	12/9/2009 04:30:16 PM	1 N-G Impulse	+190 Vp	33°
161	12/9/2009 01:56:40 PM	H-N Sag	42 Vrms	20.5 cycles
160	12/9/2009 01:56:40 PM	H-N Sag	53 Vrms	6.5 cycles
159	12/9/2009 01:55:36 PM	H-N Sag	49 Vrms	19.0 cycles
158	12/9/2009 01:55:36 PM	H-N Sag	53 Vrms	6.5 cycles
157	12/9/2009 01:54:40 PM	H-N Sag	48 Vrms	19.0 cycles
156	12/9/2009 01:54:32 PM	H-N Sag	53 Vrms	6.5 cycles
155	12/9/2009 01:54:16 PM	H-N Sag	98 Vrms	3.5 cycles
154	12/9/2009 01:11:28 PM	H-N Sag	97 Vrms	3.5 cycles
153	12/9/2009 01:10:40 PM	H-N Sag	24 Vrms	19.0 cycles
152	12/9/2009 01:10:40 PM	H-N Sag	52 Vrms	7.0 cycles
151	12/9/2009 01:09:44 PM	H-N Sag	49 Vrms	19.0 cycles
150	12/9/2009 01:09:44 PM	H-N Sag	44 Vrms	6.5 cycles
149	12/9/2009 01:09:44 PM	H-N Sag	93 Vrms	5.0 cycles
148	12/9/2009 01:09:44 PM	H-N Sag	56 Vrms	2.0 cycles
147	12/9/2009 12:16:00 PM	H-N Sag	50 Vrms	19.5 cycles
146	12/9/2009 12:16:00 PM	H-N Sag	47 Vrms	6.5 cycles
145	12/9/2009 12:15:52 PM	H-N Sag	103 Vrms	1.5 cycles
144	12/9/2009 12:15:52 PM	H-N Sag	56 Vrms	2.0 cycles

143	12/9/2009 12:09:04 PM	H-N Sag	46 Vrms	20.5 cycles
142	12/9/2009 12:09:04 PM	H-N Sag	52 Vrms	6.5 cycles
141	12/9/2009 12:08:56 PM	H-N Sag	56 Vrms	2.0 cycles
140	12/9/2009 12:05:28 PM	H-N Sag	95 Vrms	5.5 cycles
139	12/9/2009 12:05:28 PM	H-N Sag	54 Vrms	2.0 cycles
138	12/9/2009 09:36:32 AM	H-N Surge	138 Vrms	1.5 cycles
137	12/6/2009 04:03:20 PM	N-G Surge	13 Vrms	1.0 cycles
136	12/6/2009 03:56:08 PM	5 H-N Impulses	-240 Vp	268°
135	12/6/2009 07:56:40 AM	Outage	0 Vrms	07:59:28
134	12/4/2009 07:12:08 PM	N-G Surge	11 Vrms	1.0 cycles
133	12/4/2009 06:55:52 PM	N-G Surge	15 Vrms	1.0 cycles
132	12/4/2009 06:33:52 PM	4 N-G Impulses	+120 Vp	46°
131	12/4/2009 06:10:40 PM	3 N-G Impulses	+120 Vp	53°
130	12/1/2009 04:57:36 PM	N-G Surge	15 Vrms	1.0 cycles
129	12/1/2009 04:51:36 PM	N-G Surge	15 Vrms	1.0 cycles
128	12/1/2009 04:43:36 PM	N-G Surge	14 Vrms	1.0 cycles
127	12/1/2009 01:48:40 PM	Loss of Synchronization		< 8 seconds
126	12/1/2009 01:48:40 PM	1 N-G Impulse	+330 Vp	318°
125	12/1/2009 01:48:40 PM	1 N-G Impulse	-150 Vp	318°
124	12/1/2009 01:48:40 PM	1 H-N Impulse	+600 Vp	318°
123	12/1/2009 01:48:40 PM	1 H-N Impulse	-340 Vp	318°
122	12/1/2009 01:45:20 PM	N-G Surge	13 Vrms	1.0 cycles
121	12/1/2009 01:41:28 PM	N-G Surge	14 Vrms	1.0 cycles
120	12/1/2009 01:33:44 PM	N-G Surge	14 Vrms	1.0 cycles
119	12/1/2009 01:16:08 PM	N-G Surge	12 Vrms	1.0 cycles
118	12/1/2009 12:47:36 PM	3 N-G Impulses	-120 Vp	247°
117	12/1/2009 12:38:24 PM	4 N-G Impulses	+120 Vp	41°
116	12/1/2009 12:34:08 PM	3 N-G Impulses	+120 Vp	58°
115	12/1/2009 12:32:08 PM	3 N-G Impulses	+110 Vp	59°
114	12/1/2009 12:16:16 PM	5 N-G Impulses	+120 Vp	52°
113	12/1/2009 12:13:52 PM	N-G Surge	19 Vrms	1.0 cycles
112	12/1/2009 09:26:16 AM	3 N-G Impulses	+120 Vp	55°
111	12/1/2009 08:28:08 AM	N-G Surge	14 Vrms	1.0 cycles
110	12/1/2009 08:23:12 AM	N-G Surge	21 Vrms	1.0 cycles
109	12/1/2009 08:04:56 AM	1 N-G Impulse	+290 Vp	87°
108	12/1/2009 08:04:56 AM	1 H-N Impulse	-330 Vp	87°
107	11/30/2009 01:50:16 PM	4 N-G Impulses	+120 Vp	58°
106	11/29/2009 02:04:24 PM	N-G Surge	14 Vrms	1.0 cycles
105	11/29/2009 01:59:20 PM	1 N-G Impulse	+350 Vp	95°
104	11/29/2009 01:59:20 PM	1 H-N Impulse	+240 Vp	95°
103	11/29/2009 01:59:20 PM	1 H-N Impulse	-400 Vp	95°
102	11/29/2009 01:54:16 PM	N-G Surge	15 Vrms	1.0 cycles
101	11/29/2009 12:40:40 PM	N-G Surge	26 Vrms	1.0 cycles
100	11/29/2009 12:08:56 PM	3 N-G Impulses	+110 Vp	69°
99	11/29/2009 12:00:56 PM	Loss of Synchronization		< 8 seconds
98	11/29/2009 12:00:56 PM	4 N-G Impulses	+140 Vp	245°
97	11/29/2009 12:00:56 PM	4 N-G Impulses	-180 Vp	245°
96	11/29/2009 12:00:56 PM	4 H-N Impulses	-210 Vp	245°
95	11/29/2009 11:37:28 AM	12 N-G Impulses	+210 Vp	46°
94	11/29/2009 11:37:28 AM	12 N-G Impulses	-140 Vp	46°
93	11/29/2009 11:37:28 AM	12 H-N Impulses	+230 Vp	46°
92	11/28/2009 11:30:16 AM	N-G Surge	23 Vrms	1.0 cycles
91	11/28/2009 10:59:28 AM	N-G Surge	12 Vrms	1.0 cycles
90	11/28/2009 10:58:16 AM	3 N-G Impulses	+110 Vp	57°
89	11/27/2009 10:50:00 AM	N-G Surge	11 Vrms	1.0 cycles
88	11/27/2009 10:45:36 AM	N-G Surge	13 Vrms	1.0 cycles
87	11/27/2009 10:38:48 AM	3 N-G Impulses	+130 Vp	239°
86	11/27/2009 10:38:48 AM	3 N-G Impulses	-170 Vp	239°
85	11/27/2009 10:28:48 AM	N-G Surge	11 Vrms	1.0 cycles
84	11/27/2009 09:06:16 AM	3 N-G Impulses	+110 Vp	63°
83	11/27/2009 08:28:00 AM	N-G Surge	19 Vrms	1.0 cycles
82	11/25/2009 05:00:16 PM	N-G Surge	15 Vrms	1.0 cycles
81	11/25/2009 04:55:12 PM	N-G Surge	19 Vrms	1.0 cycles
80	11/25/2009 04:45:28 PM	N-G Surge	12 Vrms	1.0 cycles
79	11/25/2009 12:49:28 PM	4 N-G Impulses	+110 Vp	45°

78	11/25/2009 12:36:32 PM	N-G Surge	13 Vrms	1.0 cycles
77	11/24/2009 12:03:52 PM	N-G Surge	12 Vrms	1.0 cycles
76	11/24/2009 11:58:56 AM	N-G Surge	13 Vrms	1.0 cycles
75	11/24/2009 11:15:36 AM	3 N-G Impulses	+110 Vp	239°
74	11/24/2009 11:15:36 AM	3 N-G Impulses	-150 Vp	239°
73	11/24/2009 11:14:08 AM	N-G Surge	14 Vrms	1.0 cycles
72	11/22/2009 12:57:44 PM	N-G Surge	18 Vrms	1.0 cycles
71	11/22/2009 12:53:36 PM	1 N-G Impulse	+250 Vp	85°
70	11/22/2009 12:53:36 PM	1 H-N Impulse	+240 Vp	85°
69	11/22/2009 12:53:36 PM	1 H-N Impulse	-380 Vp	85°
68	11/22/2009 12:41:04 PM	3 N-G Impulses	-110 Vp	246°
67	11/22/2009 12:17:20 PM	N-G Surge	11 Vrms	1.0 cycles
66	11/22/2009 10:16:08 AM	4 N-G Impulses	+120 Vp	52°
65	11/22/2009 10:10:16 AM	3 N-G Impulses	-110 Vp	258°
64	11/21/2009 03:26:32 PM	N-G Surge	16 Vrms	1.0 cycles
63	11/21/2009 02:39:52 PM	Loss of Synchronization		00:00:08
62	11/21/2009 02:39:52 PM	1 N-G Impulse	+300 Vp	310°
61	11/21/2009 02:39:52 PM	1 N-G Impulse	-120 Vp	310°
60	11/21/2009 02:39:52 PM	1 H-N Impulse	+480 Vp	310°
59	11/21/2009 02:39:52 PM	1 H-N Impulse	-270 Vp	310°
58	11/21/2009 11:15:28 AM	2 N-G Impulses	+110 Vp	73°
57	11/21/2009 10:28:40 AM	H-N Surge	132 Vrms	3.5 cycles
56	11/20/2009 07:44:16 AM	Loss of Synchronization		< 8 seconds
55	11/20/2009 07:44:16 AM	1 N-G Impulse	+230 Vp	280°
54	11/20/2009 07:44:16 AM	1 H-N Impulse	+410 Vp	280°
53	11/20/2009 07:44:16 AM	1 H-N Impulse	-240 Vp	280°
52	11/20/2009 07:14:48 AM	N-G Surge	43 Vrms	1.0 cycles
51	11/19/2009 01:04:00 PM	3 N-G Impulses	+110 Vp	258°
50	11/19/2009 01:04:00 PM	3 N-G Impulses	-130 Vp	258°
49	11/16/2009 02:35:28 PM	Loss of Synchronization		00:00:08
48	11/16/2009 02:35:28 PM	1 N-G Impulse	+300 Vp	329°
47	11/16/2009 02:35:28 PM	1 N-G Impulse	-130 Vp	329°
46	11/16/2009 02:35:28 PM	1 H-N Impulse	+530 Vp	329°
45	11/16/2009 02:35:28 PM	1 H-N Impulse	-300 Vp	329°
44	11/16/2009 12:58:40 PM	4 N-G Impulses	+120 Vp	63°
43	11/16/2009 12:52:56 PM	3 N-G Impulses	-130 Vp	244°
42	11/16/2009 12:52:48 PM	4 N-G Impulses	+130 Vp	250°
41	11/16/2009 12:52:48 PM	4 N-G Impulses	-160 Vp	250°
40	11/15/2009 01:32:56 PM	N-G Surge	13 Vrms	1.0 cycles
39	11/15/2009 01:04:32 PM	N-G Surge	31 Vrms	1.0 cycles
38	11/15/2009 12:50:08 PM	4 N-G Impulses	-130 Vp	240°
37	11/15/2009 12:48:40 PM	N-G Surge	11 Vrms	1.0 cycles
36	11/15/2009 12:40:48 PM	4 N-G Impulses	+110 Vp	63°
35	11/15/2009 11:55:44 AM	3 N-G Impulses	-120 Vp	253°
34	11/15/2009 11:54:40 AM	3 N-G Impulses	-120 Vp	267°
33	11/15/2009 11:45:28 AM	3 N-G Impulses	-110 Vp	252°
32	11/15/2009 10:30:32 AM	1 N-G Impulse	+150 Vp	245°
31	11/13/2009 08:16:48 AM	Loss of Synchronization		00:07:28
30	11/13/2009 08:16:48 AM	1 N-G Impulse	+330 Vp	159°
29	11/13/2009 08:16:48 AM	1 N-G Impulse	-130 Vp	159°
28	11/13/2009 08:16:48 AM	1 H-N Impulse	+280 Vp	159°
27	11/13/2009 08:16:48 AM	1 H-N Impulse	-510 Vp	159°
26	11/12/2009 10:05:04 AM	4 N-G Impulses	+110 Vp	48°
25	11/12/2009 09:57:12 AM	N-G Surge	13 Vrms	1.0 cycles
24	11/12/2009 09:55:52 AM	4 N-G Impulses	+120 Vp	43°
23	11/12/2009 09:33:20 AM	4 N-G Impulses	+120 Vp	250°
22	11/12/2009 09:33:20 AM	4 N-G Impulses	-160 Vp	250°
21	11/10/2009 04:48:56 PM	N-G Surge	15 Vrms	1.0 cycles
20	11/10/2009 04:10:56 PM	5 N-G Impulses	+110 Vp	45°
19	11/10/2009 04:01:52 PM	3 N-G Impulses	-110 Vp	256°
18	11/10/2009 03:38:32 PM	N-G Surge	21 Vrms	1.0 cycles
17	11/10/2009 03:08:56 PM	4 N-G Impulses	+130 Vp	258°
16	11/10/2009 03:08:56 PM	4 N-G Impulses	-170 Vp	258°
15	11/10/2009 02:59:36 PM	3 N-G Impulses	+110 Vp	66°
14	11/10/2009 02:55:52 PM	3 N-G Impulses	+110 Vp	242°

13	11/10/2009 02:55:52 PM	3 N-G Impulses	-140 Vp	242°
12	11/8/2009 08:48:16 AM	1 N-G Impulse	+240 Vp	88°
11	11/8/2009 08:48:16 AM	1 H-N Impulse	+230 Vp	88°
10	11/8/2009 08:48:16 AM	1 H-N Impulse	-400 Vp	88°
9	11/8/2009 08:43:12 AM	N-G Surge	25 Vrms	1.0 cycles
8	11/7/2009 12:06:56 PM	3 N-G Impulses	+120 Vp	278°
7	11/7/2009 12:06:56 PM	3 N-G Impulses	-150 Vp	278°
6	11/7/2009 11:57:36 AM	3 N-G Impulses	+110 Vp	236°
5	11/7/2009 11:57:36 AM	3 N-G Impulses	-130 Vp	236°
4	11/7/2009 11:53:44 AM	4 N-G Impulses	+120 Vp	59°
3	11/7/2009 11:51:28 AM	3 N-G Impulses	-130 Vp	237°
2	11/7/2009 11:42:16 AM	N-G Surge	23 Vrms	1.0 cycles
1	11/6/2009 03:44:00 AM	Outage	0 Vrms	00:00:32