

Netquality report

Analysis EN 50160

Signatur

Company:	UPI
Location:	BANDUNG
Measuring point:	POWER QUALITY
Device name:	00000C3A UMG 510
Database:	C:\Documents and Settings\Ase Subandi\.pas\pasdb
Analysis Timeframe:	March 16, 2010 12:00 AM - March 17, 2010 11:59 PM
Analysis date:	March 26, 2010
Creator:	E ASE SUBANDI
Analysis application:	PAS 1.5.0(2008-07-29) build: 5607
Comment:	ANALYSIS 4

Overview

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2. Supply frequency	OK	Page4
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Main input

Nominal voltage	220V
Nominal current	0A
Frequency	50Hz
Event limits	Sag: 90%; Swell: 110%; Interruption: 5%; Absolut voltage change: Off
Transient limits	Trns: 28%; Peak: 141%

Auxillary input

Nominal voltage	0V
Nominal current	0A
Event limits	Sag: Off; Swell: Off; Interruption: Off; Absolut voltage change: Off
Transient limits	Trns: Off; Peak: Off

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Analysis	March 16, 2010 12:00 AM - March 17, 2010 11:59 PM
Timeframe:	
Device:	UMG510(Rel. "Oct 22 2008 08:36:43",001034)

Flicker

In 77.3% of the time the flicker was above 1.0.

Flicker

Name	Average	Minimum	Maximum
Long term flicker L1	1.12	0.74	1.34

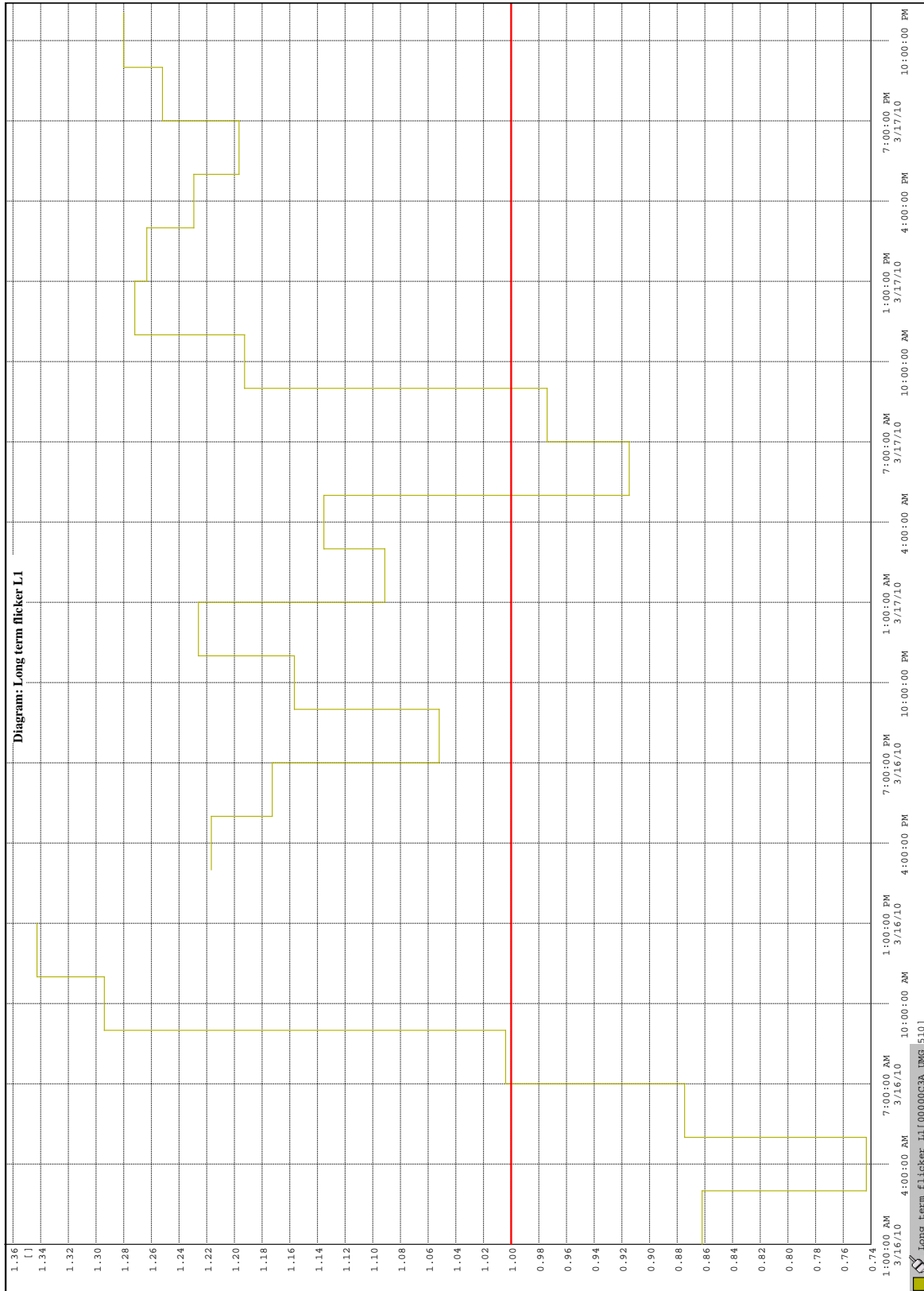
Errors

No errors occurred

Warnings

Missing time sequence from 3/16/10 1:00:00 PM to 3/16/10 1:10:00 PM

Diagram: Long term flicker L1



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Supply frequency

In 100.0% of the time the frequency was between 49.5hz and 50.5hz.

Supply frequency

Name	Average	Minimum	Maximum
Frequency	50.15Hz	49.52Hz	50.46Hz

Errors

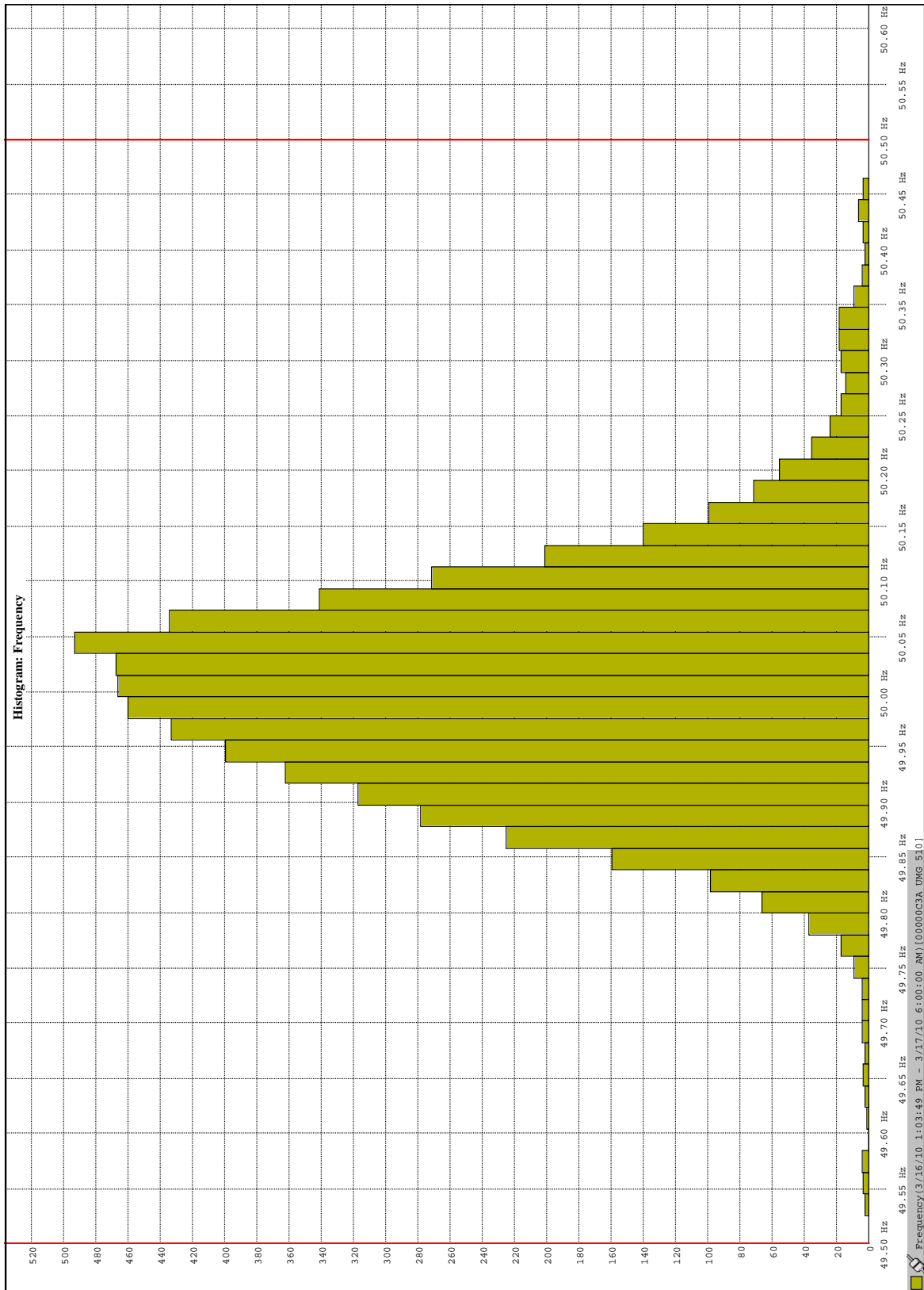
No errors occurred

Warnings

Missing time sequence from 3/16/10 12:00:00 AM to 3/16/10 1:03:49 PM

Missing time sequence from 3/17/10 6:00:00 AM to 3/17/10 11:59:59 PM

Histogram: Frequency



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Harmonics

2. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.17%	0.08%	0.20%

3. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	3.64%	1.91%	3.78%

4. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.07%	0.04%	0.08%

5. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	2.84%	2.40%	2.87%

6. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.05%	0.03%	0.06%

7. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.92%	0.64%	0.95%

8. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.04%	0.03%	0.04%

9. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.94%	0.38%	0.98%

10. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.04%	0.02%	0.04%

11. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.25%	0.05%	0.28%

12. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.03%	0.02%	0.03%

13. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.52%	0.16%	0.55%

14. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.03%	0.02%	0.03%

15. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.43%	0.20%	0.45%

16. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.03%	0.02%	0.03%

17. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.25%	0.11%	0.25%

18. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.02%	0.02%	0.02%

19. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.24%	0.12%	0.25%

20. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.02%	0.02%	0.02%

21. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.33%	0.13%	0.34%

22. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.02%	0.01%	0.02%

23. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.26%	0.13%	0.28%

24. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.02%	0.01%	0.02%

25. Voltageharmonics

Name	Average	Minimum	Maximum
Voltageharmonics L1(rel)	0.18%	0.03%	0.20%

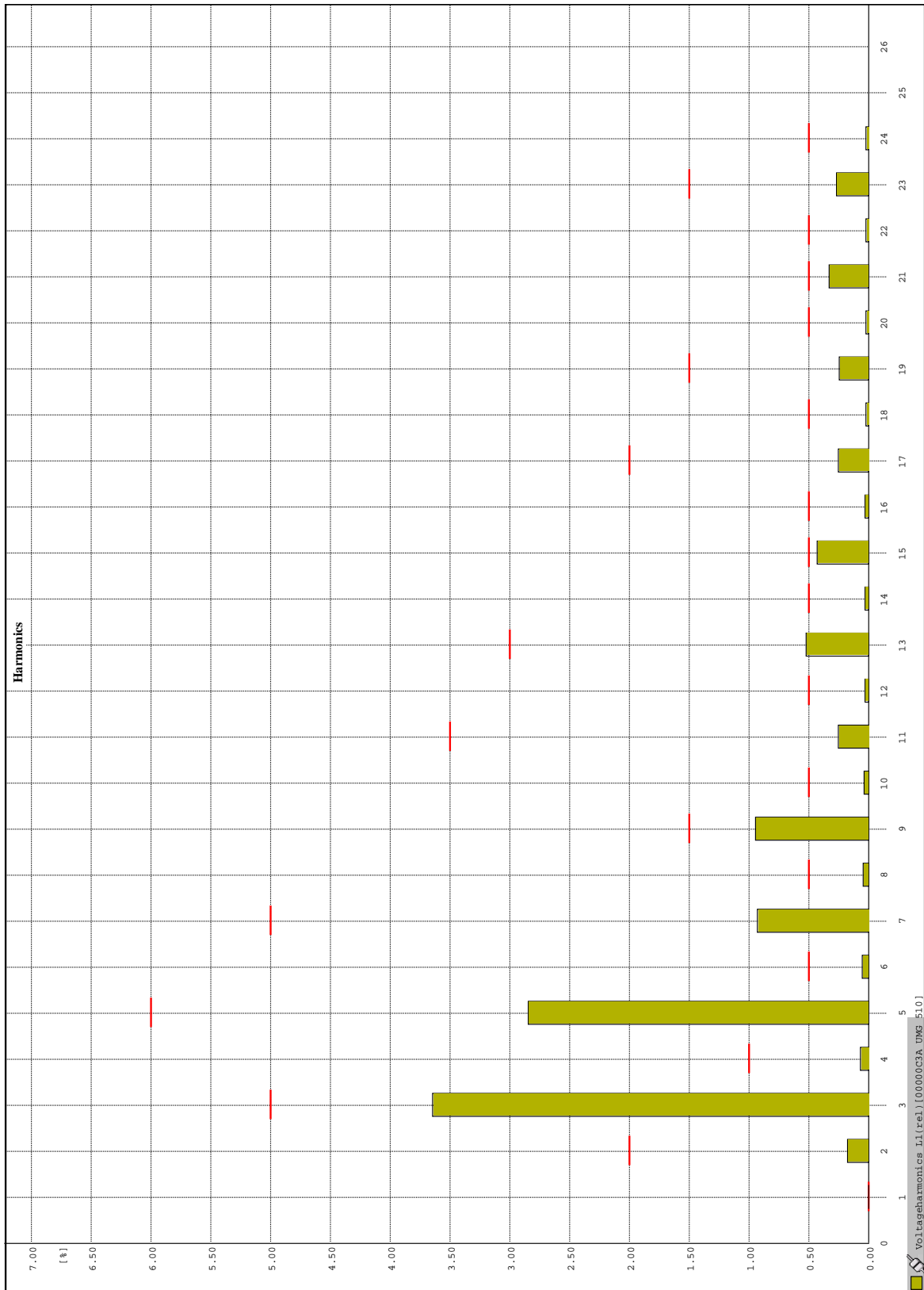
Errors

No errors occurred

Warnings

No Warnings reported

Harmonics



Analysis EN 50160

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THD

In 100.0% of the time the THD was between 0.0% and 8.0%.

THD

Name	Average	Minimum	Maximum
Total harmonic distortion voltage L1	4.74%	3.42%	4.84%

Errors

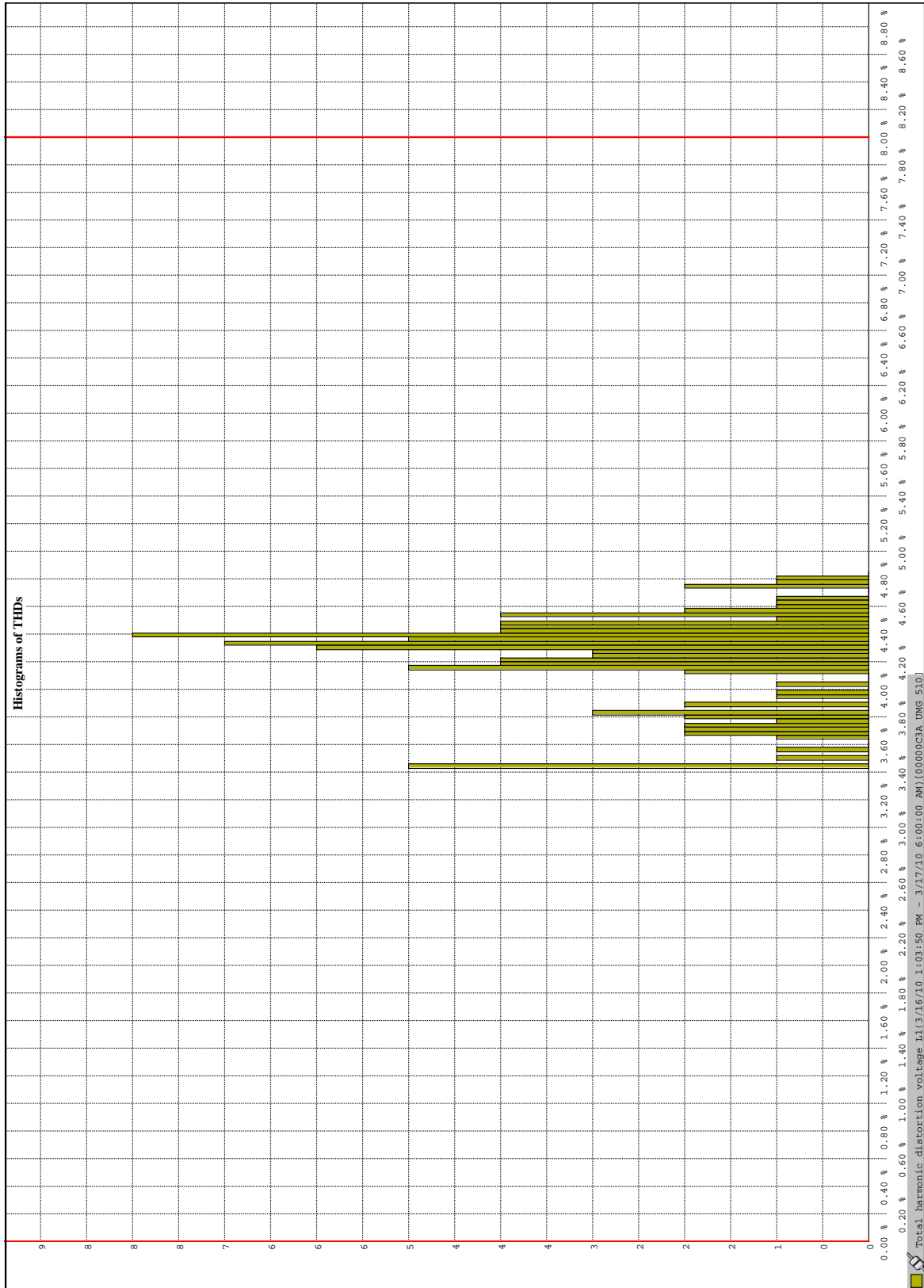
No errors occurred

Warnings

Missing time sequence from 3/16/10 12:00:00 AM to 3/16/10 1:03:50 PM

Missing time sequence from 3/17/10 6:00:00 AM to 3/17/10 11:59:59 PM

Histograms of THDs



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Symmetry

Errors

Missing Value: Spannungsunsymmetrie with 600sec average for 1 week as Histogram.

Warnings

Missing time sequence from 3/16/10 12:00:00 AM to 3/17/10 11:59:59 PM

Supply voltage

In 100.0% of the time the voltage was between 198.0V and 242.0V.

Supply voltage

Name	Average	Minimum	Maximum
Voltage L1	224.30V	207.31V	226.05V

Errors

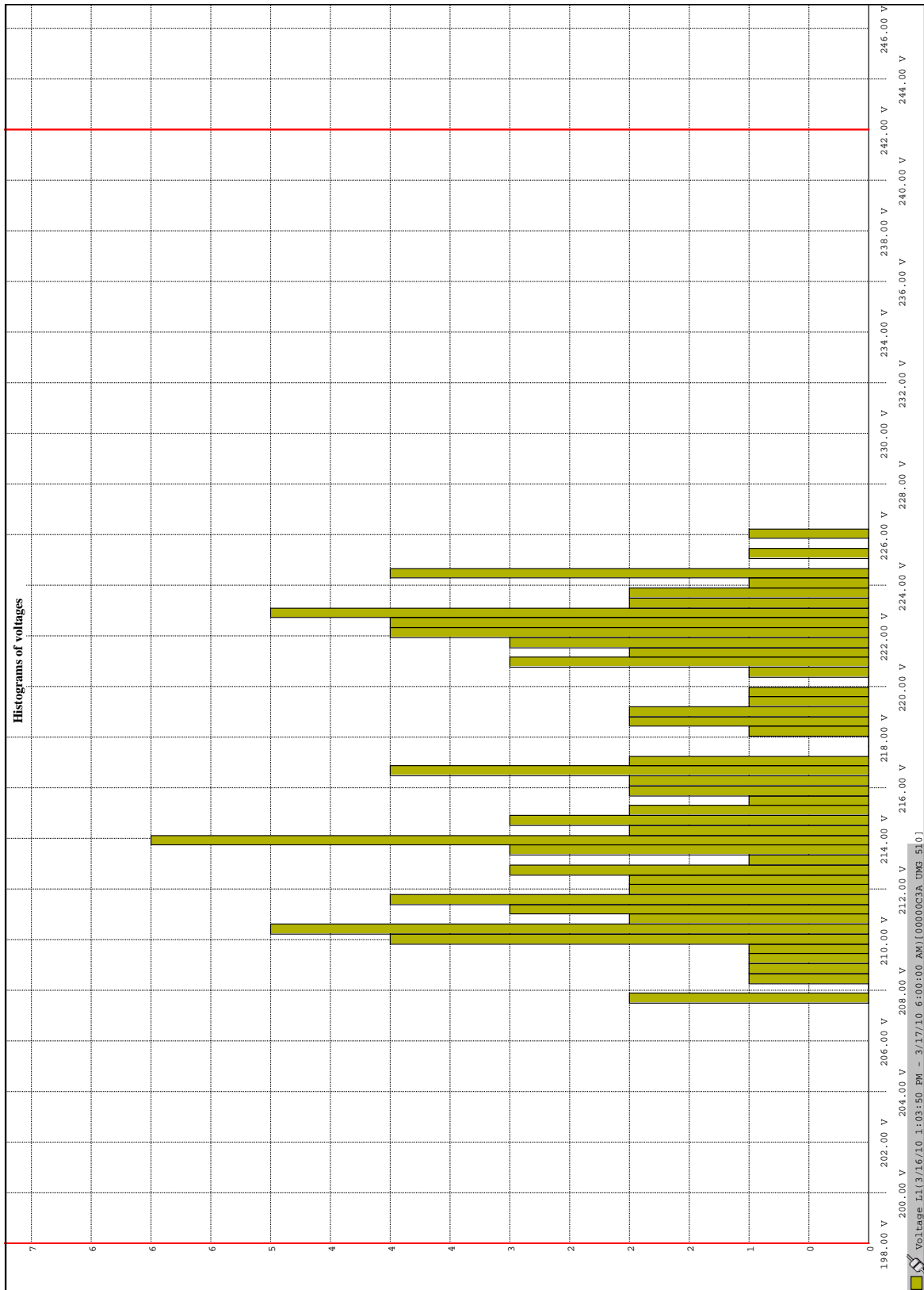
No errors occurred

Warnings

Missing time sequence from 3/16/10 12:00:00 AM to 3/16/10 1:03:50 PM

Missing time sequence from 3/17/10 6:00:00 AM to 3/17/10 11:59:59 PM

Histograms of voltages



Analysis EN 50160

Analysis March 16, 2010 12:00 AM - March 17, 2010 11:59 PM

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Voltage drop

38 events have been found.

Undervoltage

Time	Input	Average	Minimum	Duration
3/16/10 1:02:40 PM '339	L1	81.75V	14.14V	20 ms
3/17/10 11:53:31 AM '469	L1	198.53V	196.72V	679 ms
3/17/10 11:54:22 AM '329	L1	200.98V	194.10V	4'752 sec
3/17/10 11:54:47 AM '164	L1	200.79V	197.47V	8'309 sec
3/17/10 11:54:57 AM '291	L1	199.67V	191.90V	2:27'164 min
3/17/10 12:24:08 PM '846	L1	198.50V	196.19V	201 ms
3/17/10 12:24:21 PM '233	L1	198.84V	195.87V	1'123 sec
3/17/10 12:51:51 PM '496	L1	198.17V	196.51V	160 ms
3/17/10 12:56:53 PM '465	L1	200.15V	197.58V	540 ms
3/17/10 12:57:50 PM '117	L1	199.16V	196.62V	170 ms
3/17/10 12:58:45 PM '937	L1	199.57V	196.40V	701 ms
3/17/10 1:07:40 PM '079	L1	199.93V	197.15V	700 ms
3/17/10 1:09:36 PM '569	L1	200.33V	197.58V	671 ms
3/17/10 1:35:45 PM '132	L1	198.87V	197.26V	100 ms
3/17/10 1:35:47 PM '612	L1	199.50V	197.74V	80 ms
3/17/10 1:37:05 PM '894	L1	199.58V	197.85V	240 ms
3/17/10 1:55:29 PM '326	L1	198.84V	196.83V	597 ms
3/17/10 2:06:40 PM '122	L1	197.75V	195.92V	160 ms
3/17/10 2:07:07 PM '859	L1	200.52V	197.37V	1'552 sec
3/17/10 3:24:45 PM '291	L1	198.25V	197.10V	759 ms
3/17/10 3:27:16 PM '925	L1	198.30V	197.10V	130 ms
3/17/10 3:49:48 PM '200	L1	198.79V	197.58V	90 ms
3/17/10 3:55:52 PM '123	L1	198.39V	197.10V	641 ms
3/17/10 3:59:02 PM '090	L1	199.01V	197.47V	160 ms
3/17/10 3:59:39 PM '183	L1	200.35V	197.58V	1'004 sec
3/17/10 4:00:19 PM '501	L1	198.86V	195.92V	251 ms
3/17/10 4:04:57 PM '636	L1	198.39V	197.58V	130 ms
3/17/10 4:12:42 PM '781	L1	200.55V	197.47V	752 ms
3/17/10 4:19:04 PM '140	L1	198.15V	196.99V	130 ms
3/17/10 4:21:24 PM '903	L1	200.61V	197.63V	881 ms
3/17/10 4:31:19 PM '033	L1	198.35V	197.42V	130 ms
3/17/10 4:42:38 PM '205	L1	199.23V	197.96V	70 ms
3/17/10 4:58:28 PM '978	L1	198.27V	197.42V	130 ms
3/17/10 5:12:18 PM '749	L1	198.51V	197.15V	140 ms
3/17/10 5:29:59 PM '694	L1	198.27V	196.08V	170 ms
3/17/10 5:41:31 PM '326	L1	198.30V	197.47V	691 ms
3/17/10 5:55:44 PM '016	L1	198.50V	196.88V	141 ms
3/17/10 5:59:34 PM '433	L1	200.54V	197.74V	1'013 sec

Errors

No errors occurred

Warnings

No Warnings reported

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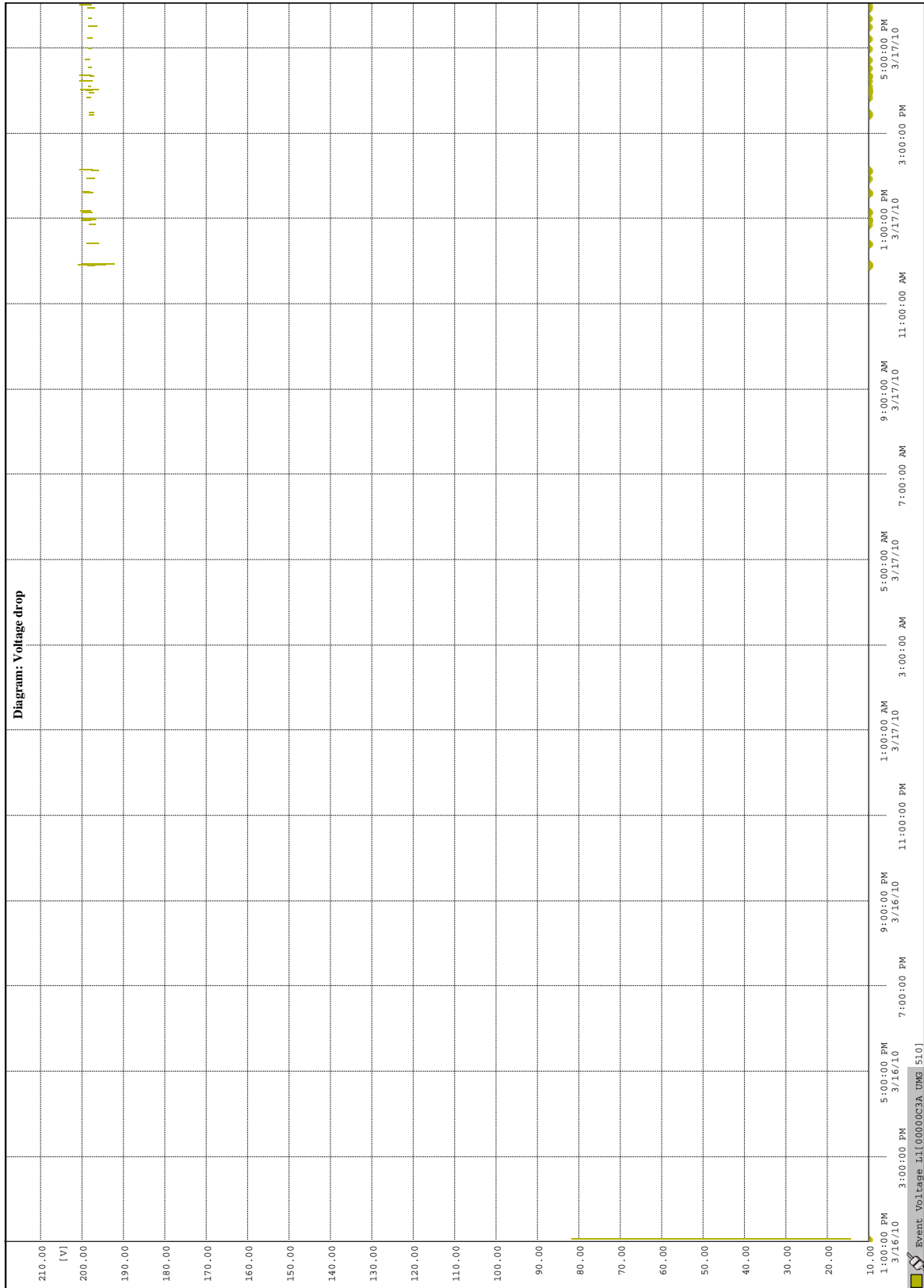
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Diagram: Voltage drop



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Transients

1 transients have been found.

Time	Type
3/17/10 9:24:30 AM '910	Transient (trns L1) 3/17/10 9:24:30 AM '910

Errors

No errors occurred

Warnings

No Warnings reported

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Transients



Analysis EN 50160

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