

Device:	ELNet PQ Energy & Power quality analyzer
Location:	
Report From date	01-03-2015
Report To date	31-03-2015

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# Summary Results

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<b>Test</b>	<b>Status</b>
Frequency Test > +1%, < -1%	Passed
Frequency Test > +4%, < -6%	Passed
Line 1 Voltage variations test > +10%, < -10%	Passed
Line 2 Voltage variations test > +10%, < -10%	Passed
Line 3 Voltage variations test > +10%, < -10%	Passed
Line 1 voltage variations test < +10%, > -15%	Passed
Line 2 voltage variations test < +10%, > -15%	Passed
Line 3 voltage variations test < +10%, > -15%	Passed
Line 1 Rapid Voltage Change > +5%, < +5%	5284 Events
Line 2 Rapid Voltage Change > +5%, < +5%	3536 Events
Line 3 Rapid Voltage Change > +5%, < +5%	5545 Events
Line 1 flicker test	Failed
Line 2 flicker test	Failed
Line 3 flicker test	Failed
Line 1 Supply voltage dips	6 Events
Line 2 Supply voltage dips	4 Events
Line 3 Supply voltage dips	10 Events
Line 1 Supply Voltage interruptions	3 Events
Line 2 Supply Voltage interruptions	3 Events
Line 3 Supply Voltage interruptions	2 Events
Line 1 Over Voltages (Swell)	182 Events
Line 2 Over Voltages (Swell)	165 Events
Line 3 Over Voltages (Swell)	222 Events
Supply Voltage unbalanced	Passed
Line 1 Transient Over Voltage	No Events
Line 2 Transient Over Voltage	No Events
Line 3 Transient Over Voltage	No Events
Harmonics on line 1	Failed
Harmonics on line 2	Failed
Harmonics on line 3	Failed

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## Frequency Test > +1% < -1%

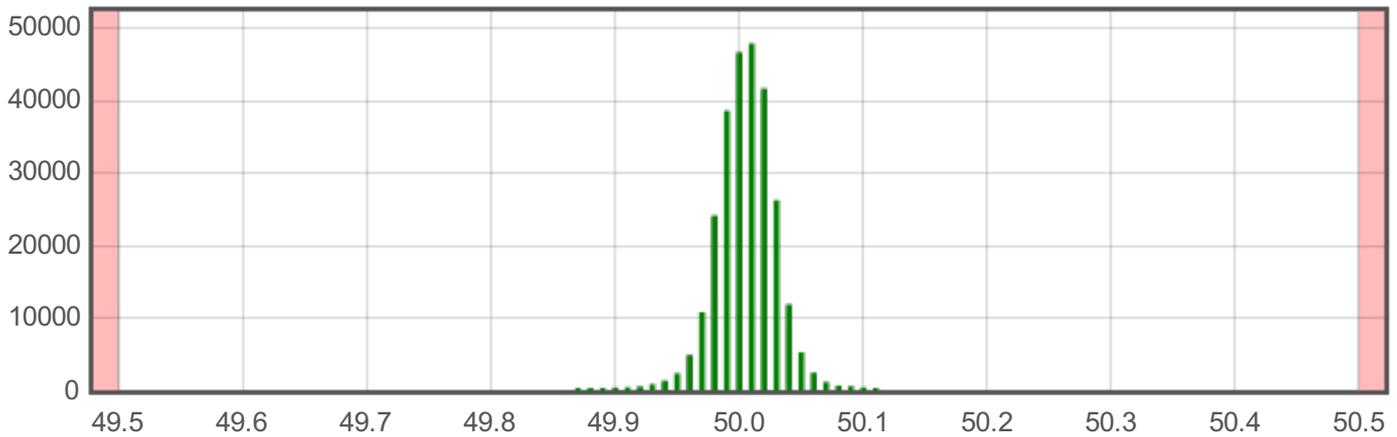
Each frequency sample is an average value of 10 sec (8640 samples per day).

The Permissible frequency range is +/- 1%

The Permissible sample percentages outside the range are 5%.

Description	Required value	Test Result
Avg. Frequency (Hz)	50	50.01
Minimum permissible (Hz)	49.5	49.87
Maximum permissible (Hz)	50.5	50.11
Permissible percent outside range	5 %	0.00 %
Number of samples		262687
Number of samples inside range		262687
Number of samples outside range		0
Minimum Frequency (Hz)		49.87
Maximum Frequency (Hz)		50.11
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

## Power Frequency distribution



## Frequency Test > +4% < -6%

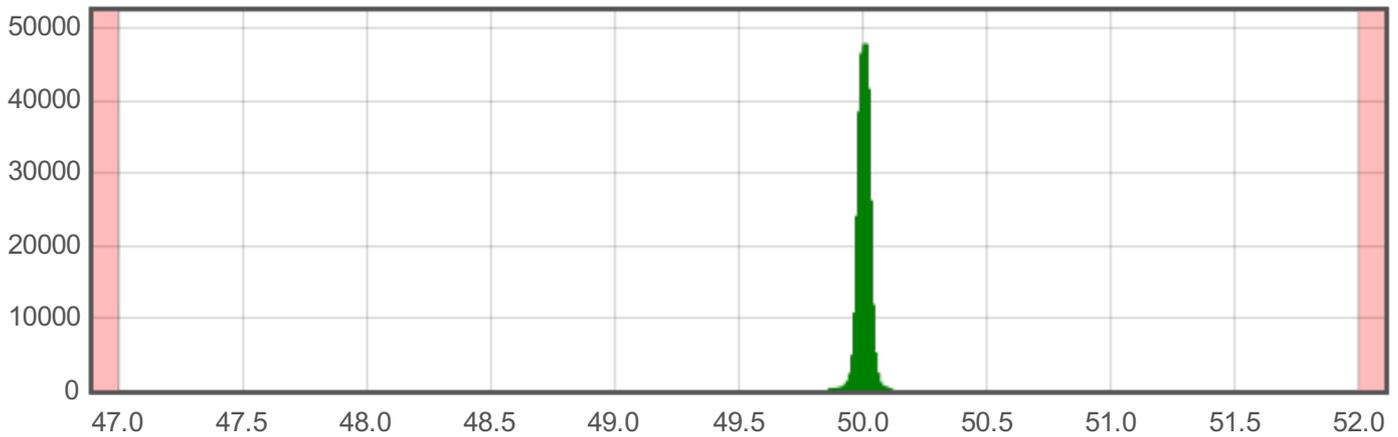
Each frequency sample is an average value of 10 sec (8640 samples per day).

The Permissible frequency range is +4% /- 6%

The Permissible sample percentage outside the range is 0%.

Description	Required value	Test Result
Avg. Frequency (Hz)	50	50.01
Minimum permissible (Hz)	47	49.87
Maximum permissible (Hz)	52	50.11
Permissible percent outside range	0 %	0.00 %
Number of samples		262687
Number of samples inside range		262687
Number of samples outside range		0
Minimum Frequency (Hz)		49.87
Maximum Frequency (Hz)		50.11
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

## Power Frequency distribution



## Line 1 Voltage variations test > +10%, < -10%

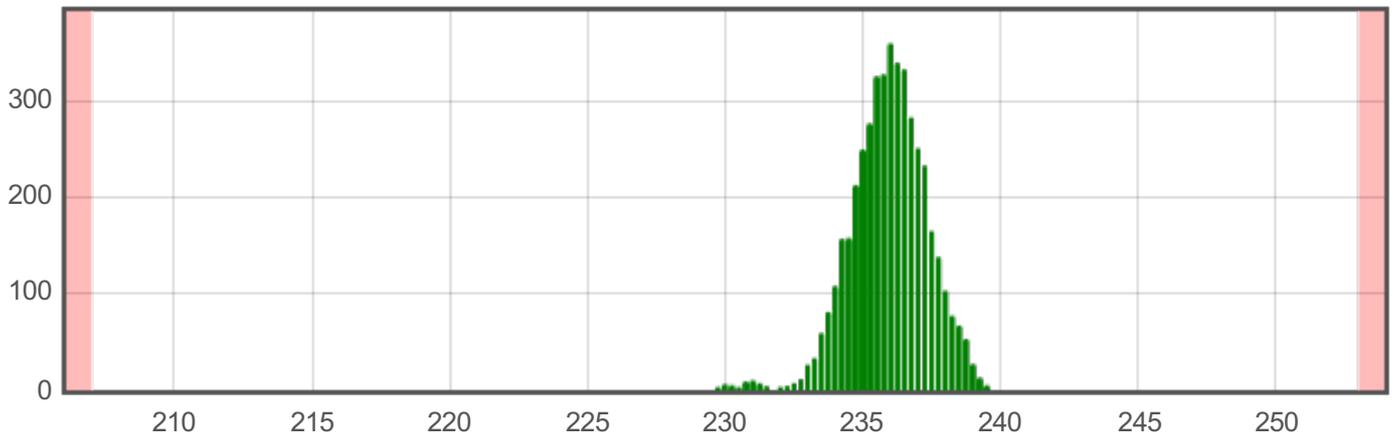
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is + /- 10%

The Permissible sample percentages outside the range are 5%. (Nominal RMS value ≤ 1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.10
Minimum permissible (Volt)	207	229.96
Maximum permissible (Volt)	253	239.58
Permissible percent outside range	5 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.96
Maximum Voltage (Volt)		239.58
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 1 Voltage distribution



## Line 2 Voltage variations test > +10%, < -10%

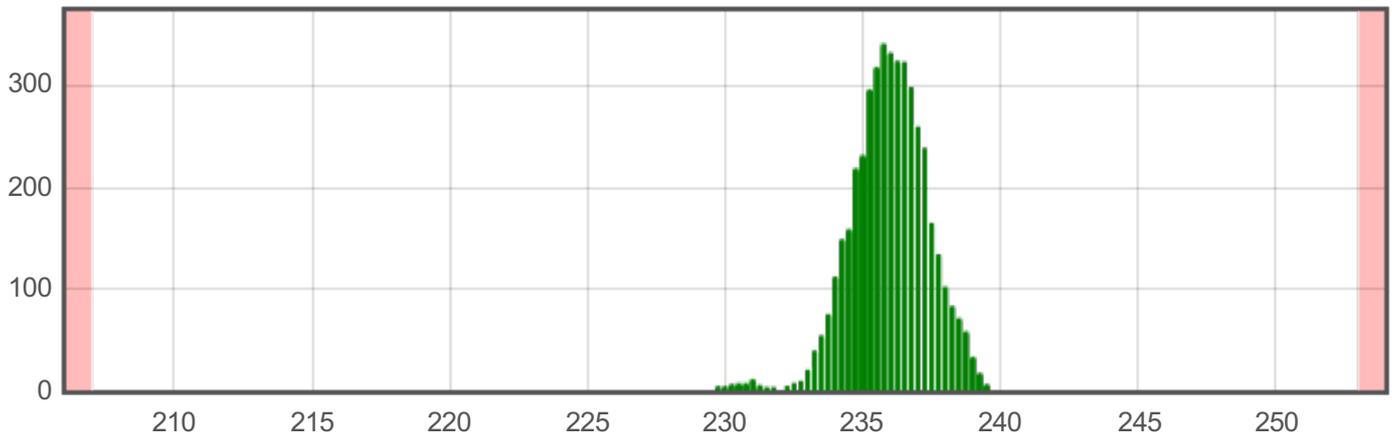
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is + /- 10%

The Permissible sample percentages outside the range are 5%. (Nominal RMS value  $\leq$  1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.13
Minimum permissible (Volt)	207	229.94
Maximum permissible (Volt)	253	239.62
Permissible percent outside range	5 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.94
Maximum Voltage (Volt)		239.62
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 2 Voltage distribution



## Line 3 Voltage variations test > +10%, < -10%

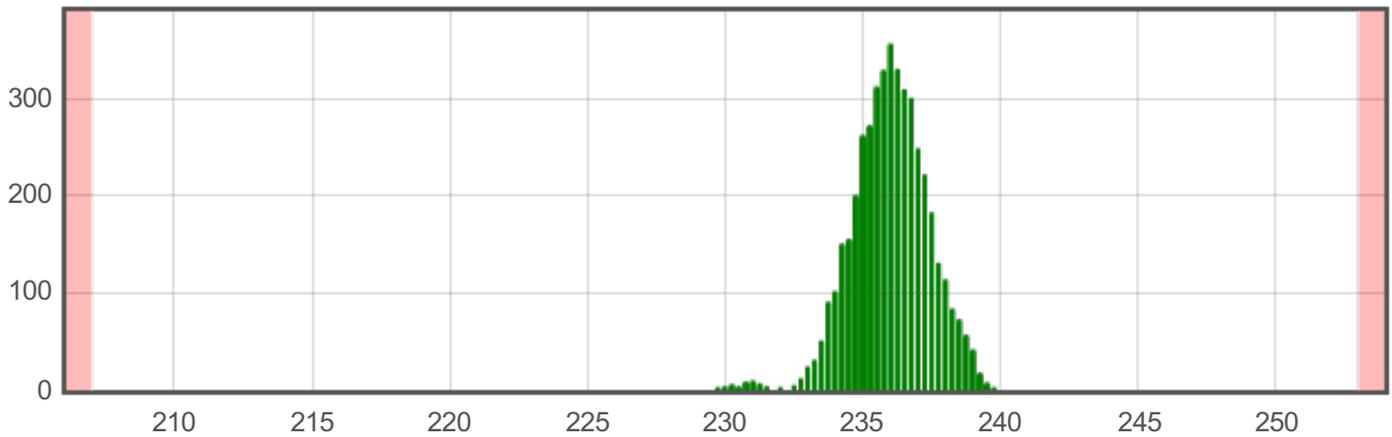
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is + /- 10%

The Permissible sample percentages outside the range are 5%. (Nominal RMS value  $\leq$  1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.15
Minimum permissible (Volt)	207	229.97
Maximum permissible (Volt)	253	239.80
Permissible percent outside range	5 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.97
Maximum Voltage (Volt)		239.80
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 3 Voltage distribution



## Line 1 voltage variations test < +10%, > -15%

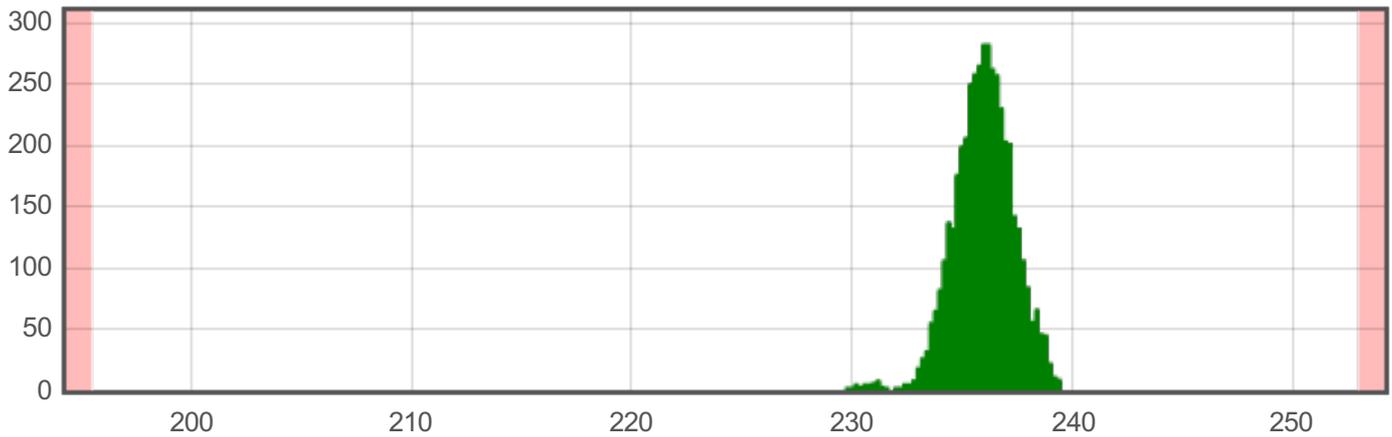
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is +10% /- 15%

The Permissible sample percentages outside the range are 0%. (Nominal RMS value ≤ 1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.10
Minimum permissible (Volt)	195.5	229.96
Maximum permissible (Volt)	253	239.58
Permissible percent outside range	0 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.96
Maximum Voltage (Volt)		239.58
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 1 Voltage distribution



## Line 2 voltage variations test < +10% > -15%

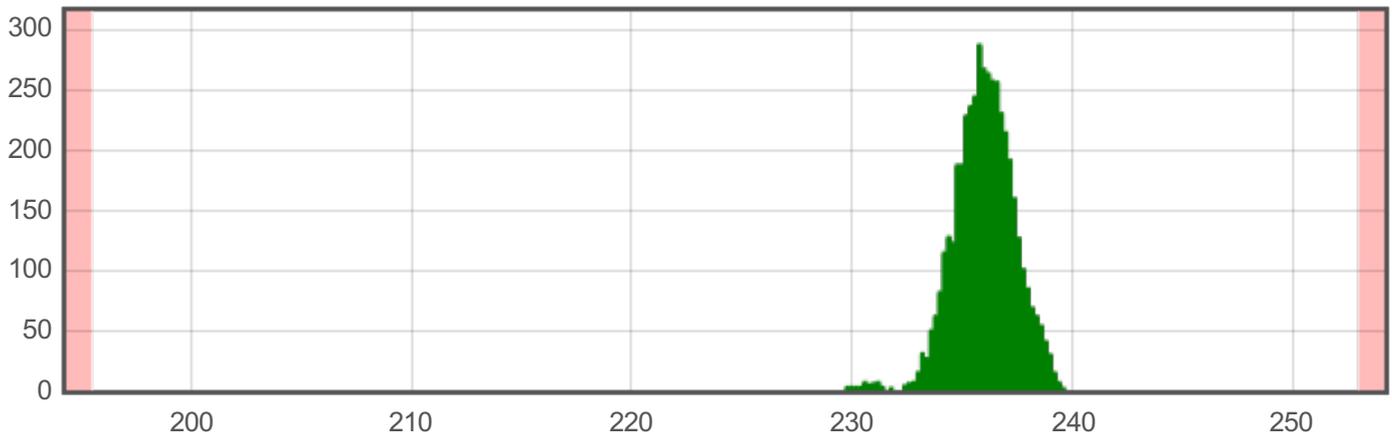
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is +10% /- 15%

The Permissible sample percentages outside the range are 0%. (Nominal RMS value ≤ 1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.13
Minimum permissible (Volt)	195.5	229.94
Maximum permissible (Volt)	253	239.62
Permissible percent outside range	0 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.94
Maximum Voltage (Volt)		239.62
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 2 Voltage distribution



## Line 3 voltage variations test < +10% > -15%

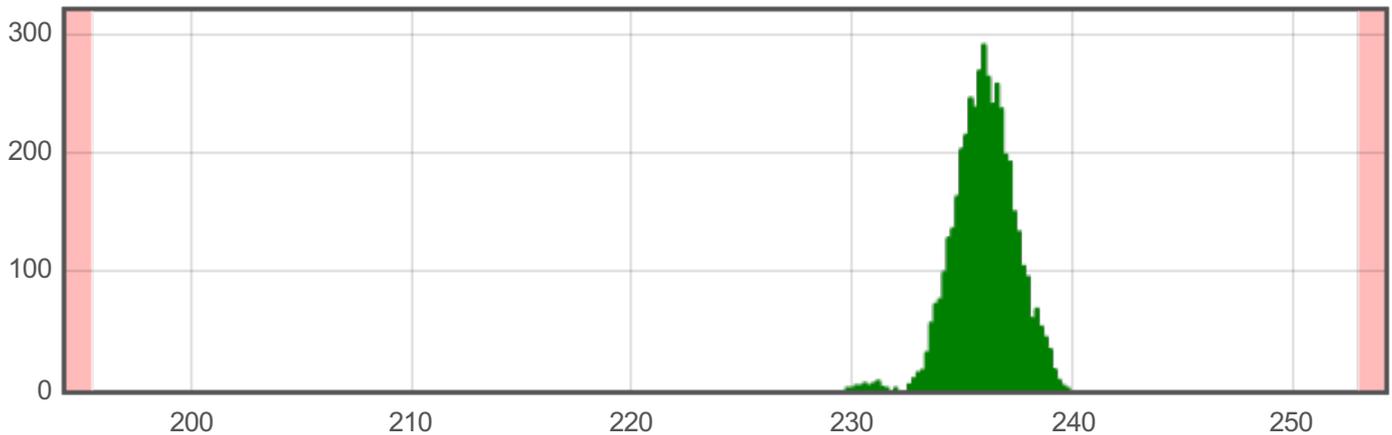
Each voltage sample is an average value of 10 minutes (144 samples per day per phase).

The Permissible voltage range is +10% /- 15%

The Permissible sample percentages outside the range are 0%. (Nominal RMS value ≤ 1kV)

Description	Required value	Test Result
Avg. Voltage (Volt)	230	236.15
Minimum permissible (Volt)	195.5	229.97
Maximum permissible (Volt)	253	239.80
Permissible percent outside range	0 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum Voltage (Volt)		229.97
Maximum Voltage (Volt)		239.80
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

### Line 3 Voltage distribution

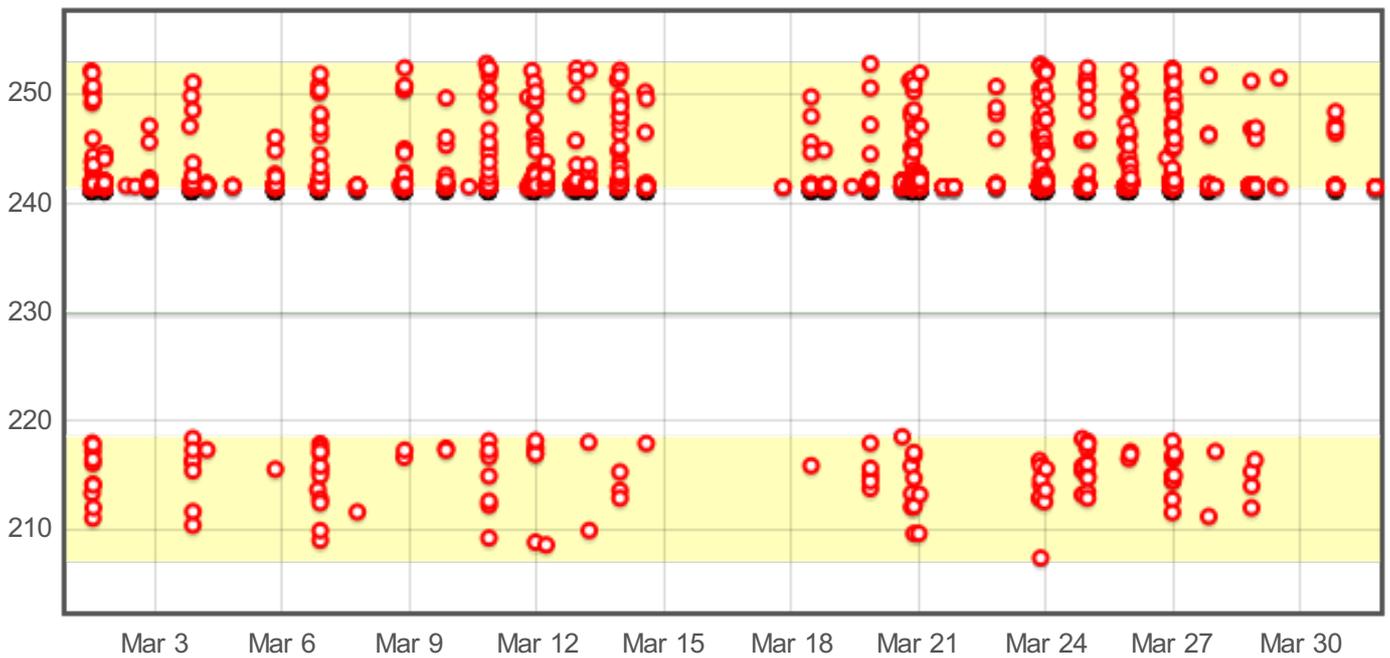


## Line 1 Rapid Voltage Change > +5%, < +5%

Supply voltage rapid change test is based on the wave RMS values.  
 The Permissible RMS voltage range is +/- 5% (Nominal RMS value ≤ 1kV)  
 Events between +/- 5% up to +/- 10% are "concern" events.

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
111% - 100%	0	0	0	0	0	0	0	0	0
110% - 109%	51	0	0	0	0	0	0	2	53
109% - 108%	45	0	0	0	0	0	2	2	49
108% - 107%	43	0	0	0	0	0	0	2	45
107% - 106%	48	0	0	0	0	0	0	3	51
106% - 105%	4958	0	0	0	0	0	5	3	4966
95% - 94%	47	0	0	0	0	0	0	0	47
94% - 93%	33	0	0	0	0	0	1	0	34
93% - 92%	24	0	0	0	0	0	0	0	24
92% - 91%	10	0	0	0	0	0	0	0	10
91% - 90%	4	0	0	0	0	0	1	0	5
<b>Total</b>									<b>5284</b>

### Line 1 Rapid Voltage Change timeline

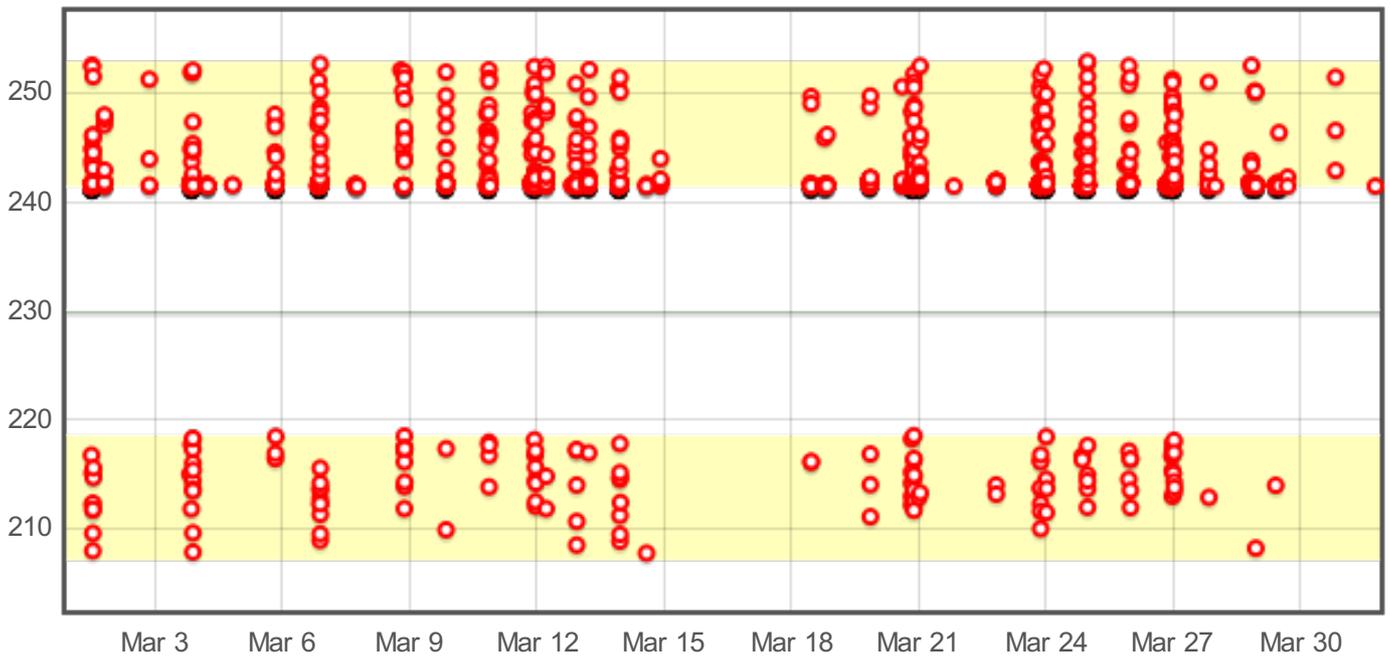


## Line 2 Rapid Voltage Change > +5%, < +5%

Supply voltage rapid change test is based on the wave RMS values.  
 The Permissible RMS voltage range is +/- 5% (Nominal RMS value ≤ 1kV)  
 Events between +/- 5% up to +/- 10% are "concern" events.

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
111% - 100%	0	0	0	0	0	0	0	0	0
110% - 109%	38	0	0	0	0	0	0	2	40
109% - 108%	36	0	0	0	0	0	1	0	37
108% - 107%	49	0	0	0	0	0	1	1	51
107% - 106%	77	0	0	0	0	0	2	1	80
106% - 105%	3183	0	0	0	0	0	1	1	3185
95% - 94%	42	0	0	0	0	0	2	1	45
94% - 93%	37	0	0	0	0	0	0	0	37
93% - 92%	40	0	0	0	0	0	0	0	40
92% - 91%	11	0	0	0	0	0	1	0	12
91% - 90%	7	0	0	0	0	0	0	0	7
105% - 104%	2	0	0	0	0	0	0	0	2
<b>Total</b>									<b>3536</b>

### Line 2 Rapid Voltage Change timeline

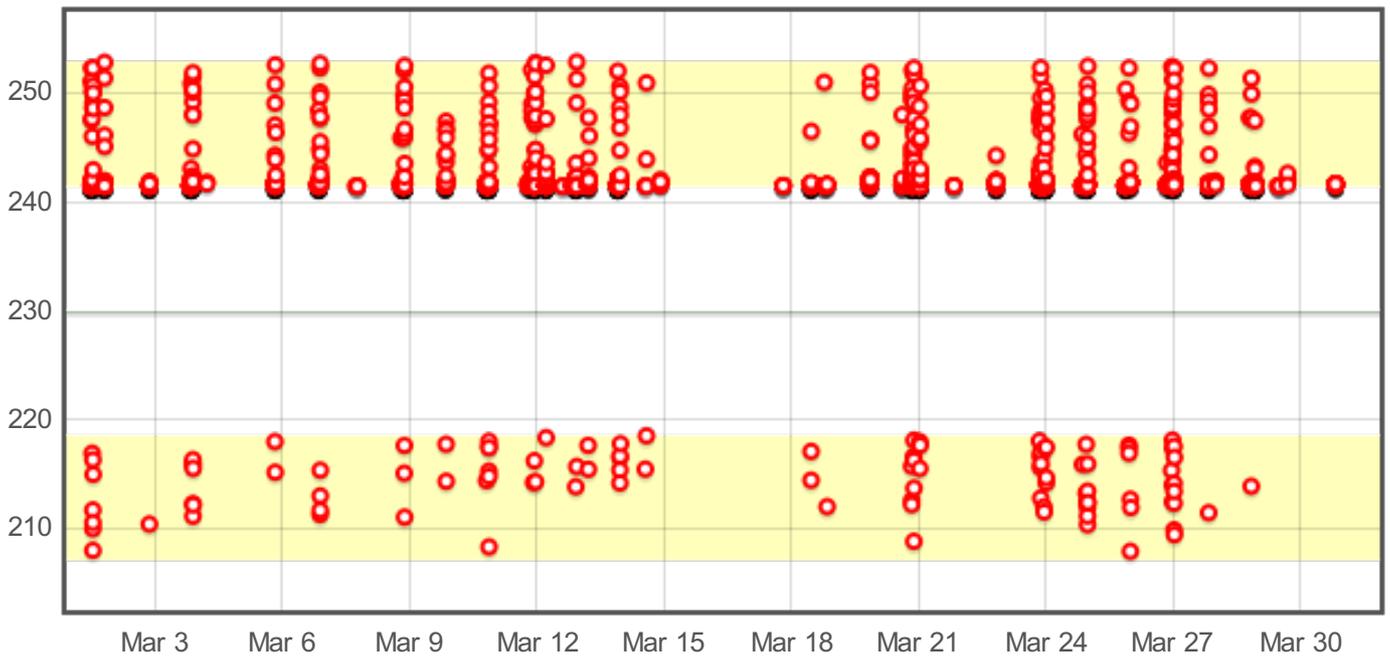


## Line 3 Rapid Voltage Change > +5%, < +5%

Supply voltage rapid change test is based on the wave RMS values.  
 The Permissible RMS voltage range is +/- 5% (Nominal RMS value ≤ 1kV)  
 Events between +/- 5% up to +/- 10% are "concern" events.

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
111% - 100%	0	0	0	0	0	0	0	0	0
110% - 109%	45	0	0	0	0	0	0	2	47
109% - 108%	57	0	0	0	0	0	2	2	61
108% - 107%	56	0	0	0	0	0	1	1	58
107% - 106%	47	0	0	0	0	0	2	1	50
106% - 105%	5216	0	0	0	0	0	6	0	5222
95% - 94%	35	0	0	0	0	0	0	0	35
94% - 93%	31	0	0	0	0	0	0	0	31
93% - 92%	23	0	0	0	0	0	1	0	24
92% - 91%	12	0	0	0	0	0	0	0	12
91% - 90%	3	0	0	0	0	0	1	0	4
105% - 104%	1	0	0	0	0	0	0	0	1
<b>Total</b>									<b>5545</b>

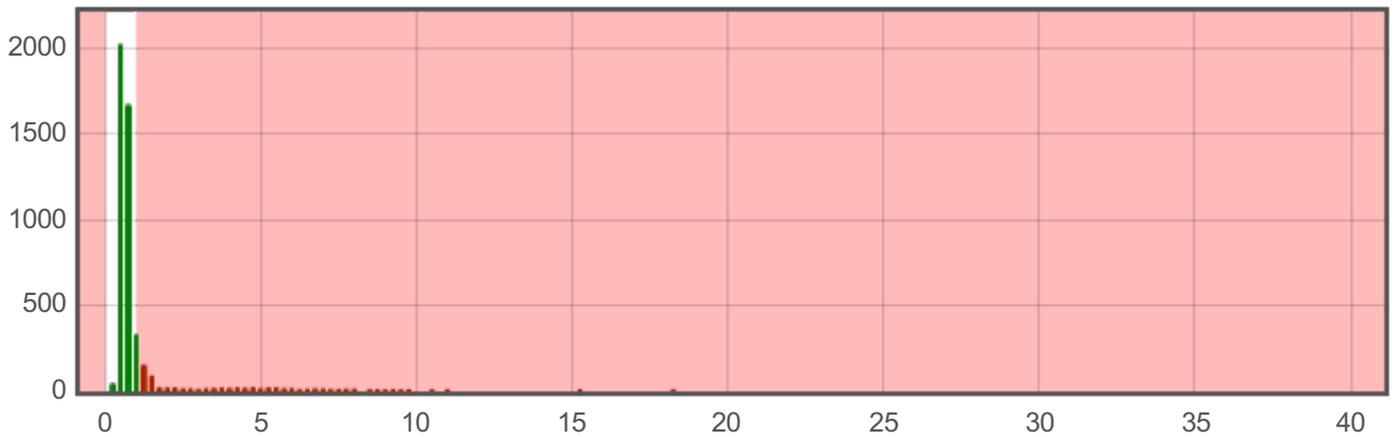
### Line 3 Rapid Voltage Change timeline



# Line 1 flicker test

This chart displays the long term flicker severity caused by voltage fluctuations under normal operating conditions. Flicker is the impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time.

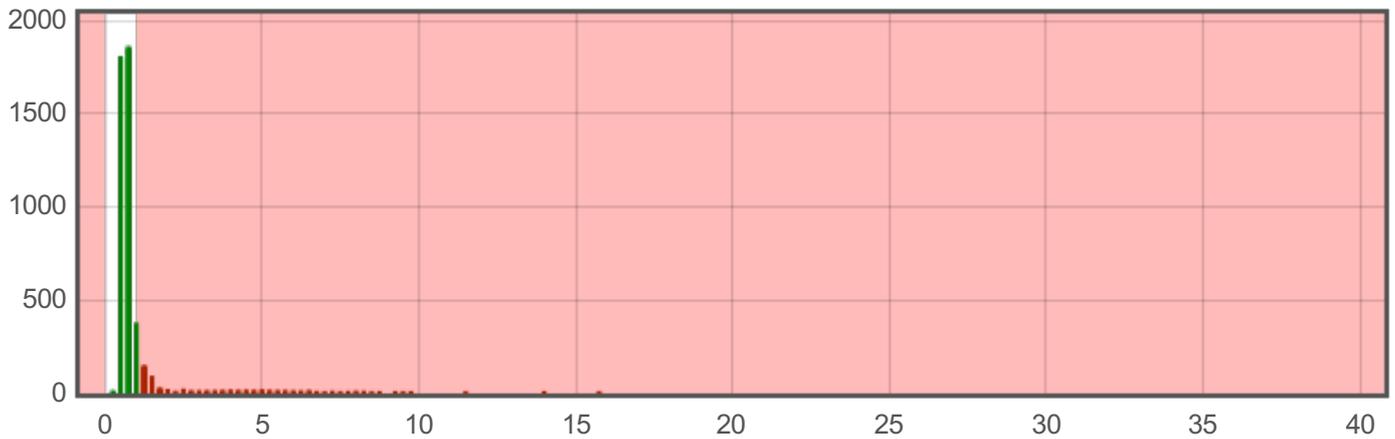
Description	Required value	Test Result
Avg. Plt		1.54
Minimum permissible	0	0.55
Maximum permissible	1	40.26
Permissible percent outside range	5 %	27.76 %
Number of samples		371
Number of samples inside range		268
Number of samples outside range		103
Minimum Plt		0.55
Maximum Plt		40.26
Percentage samples inside range		72.24 %
Percentage samples outside range		27.76 %
Result		Failed



## Line 2 flicker test

This chart displays the long term flicker severity caused by voltage fluctuations under normal operating conditions. Flicker is the impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time.

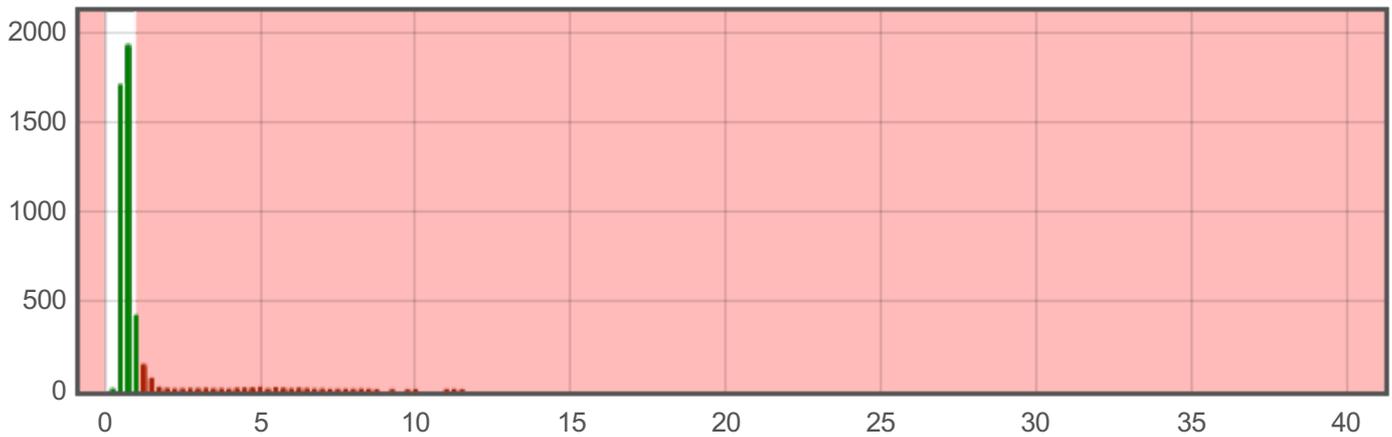
Description	Required value	Test Result
Avg. Plt		1.50
Minimum permissible	0	0.60
Maximum permissible	1	39.96
Permissible percent outside range	5 %	28.57 %
Number of samples		371
Number of samples inside range		265
Number of samples outside range		106
Minimum Plt		0.60
Maximum Plt		39.96
Percentage samples inside range		71.43 %
Percentage samples outside range		28.57 %
Result		Failed



## Line 3 flicker test

This chart displays the long term flicker severity caused by voltage fluctuations under normal operating conditions. Flicker is the impression of unsteadiness of visual sensation induced by a light stimulus whose luminance or spectral distribution fluctuates with time.

Description	Required value	Test Result
Avg. Plt		1.46
Minimum permissible	0	0.60
Maximum permissible	1	40.39
Permissible percent outside range	5 %	27.22 %
Number of samples		371
Number of samples inside range		270
Number of samples outside range		101
Minimum Plt		0.60
Maximum Plt		40.39
Percentage samples inside range		72.78 %
Percentage samples outside range		27.22 %
Result		Failed



## Line 1 Supply voltage dips

Supply voltage dip test is based on the wave RMS values.

Dips are condition in which supply voltage is reduced to a value between 90%Un and 1%Un .

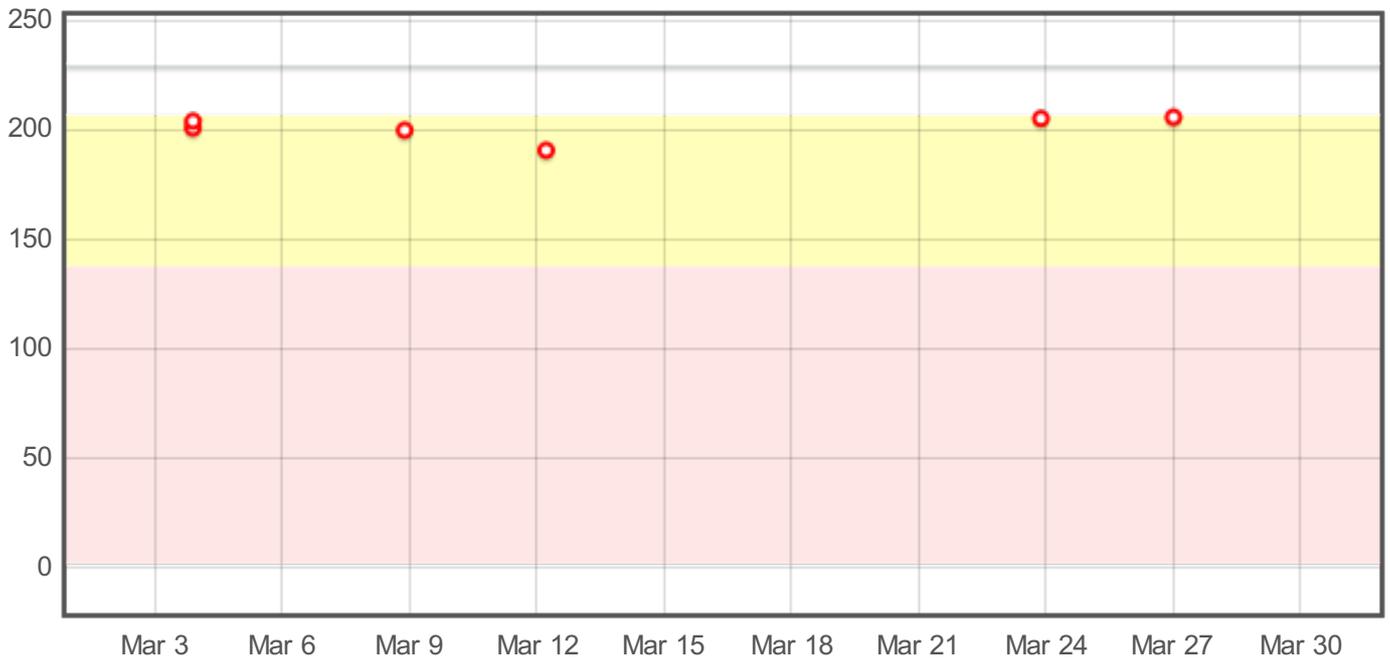
Events between 90%Un and 60%Un are "concern" events.

Events between 60%Un and 1%Un are "severe" events.

**Up to 1000 events per year is a normal condition**

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
90% - 80%	4	0	0	0	0	0	2	0	6
80% - 70%	0	0	0	0	0	0	0	0	0
70% - 60%	0	0	0	0	0	0	0	0	0
60% - 50%	0	0	0	0	0	0	0	0	0
50% - 40%	0	0	0	0	0	0	0	0	0
40% - 30%	0	0	0	0	0	0	0	0	0
30% - 20%	0	0	0	0	0	0	0	0	0
20% - 10%	0	0	0	0	0	0	0	0	0
10% - 1%	0	0	0	0	0	0	0	0	0
<b>Total concern</b>									<b>6</b>
<b>Total severe</b>									<b>0</b>
<b>Total</b>									<b>6</b>

## Line 1 supply voltage dips timeline



## Line 2 Supply voltage dips

Supply voltage dip test is based on the wave RMS values.

Dips are condition in which supply voltage is reduced to a value between 90%Un and 1%Un .

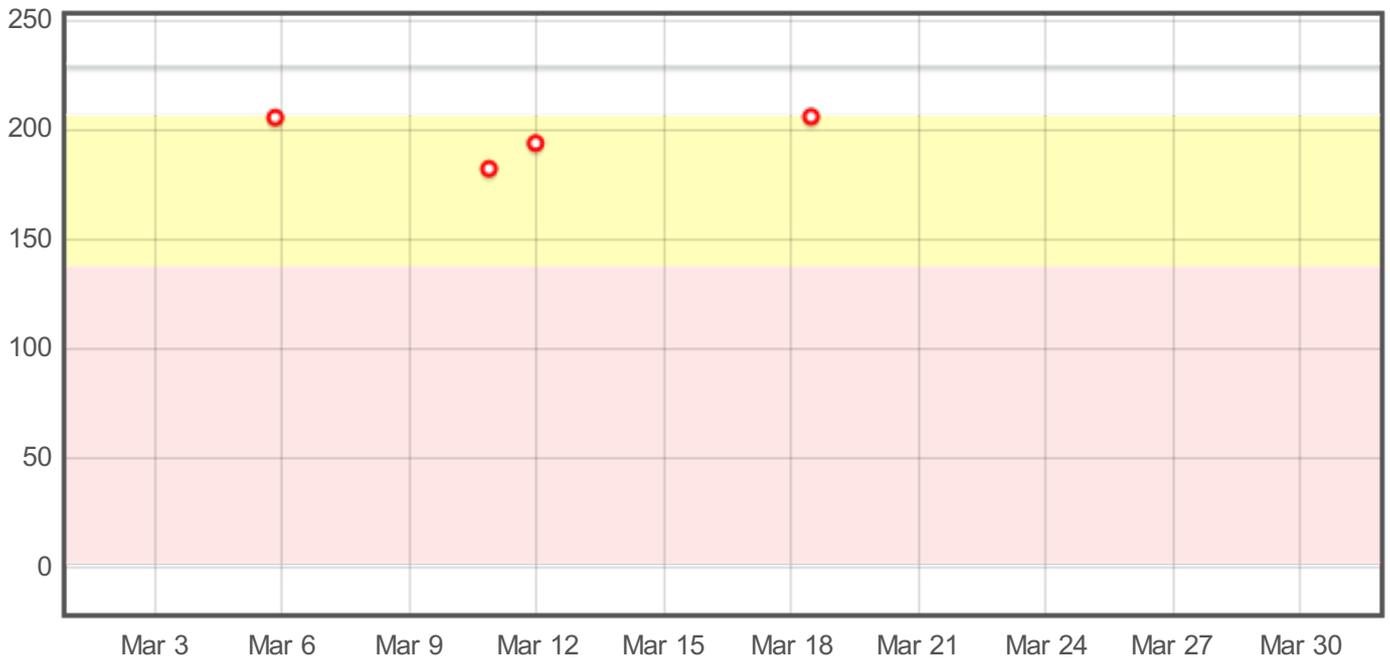
Events between 90%Un and 60%Un are "concern" events.

Events between 60%Un and 1%Un are "severe" events.

**Up to 1000 events per year is a normal condition**

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
90% - 80%	2	0	0	0	0	0	1	0	3
80% - 70%	1	0	0	0	0	0	0	0	1
70% - 60%	0	0	0	0	0	0	0	0	0
60% - 50%	0	0	0	0	0	0	0	0	0
50% - 40%	0	0	0	0	0	0	0	0	0
40% - 30%	0	0	0	0	0	0	0	0	0
30% - 20%	0	0	0	0	0	0	0	0	0
20% - 10%	0	0	0	0	0	0	0	0	0
10% - 1%	0	0	0	0	0	0	0	0	0
<b>Total concern</b>									<b>4</b>
<b>Total severe</b>									<b>0</b>
<b>Total</b>									<b>4</b>

## Line 2 supply voltage dips timeline



## Line 3 Supply voltage dips

Supply voltage dip test is based on the wave RMS values.

Dips are condition in which supply voltage is reduced to a value between 90%Un and 1%Un .

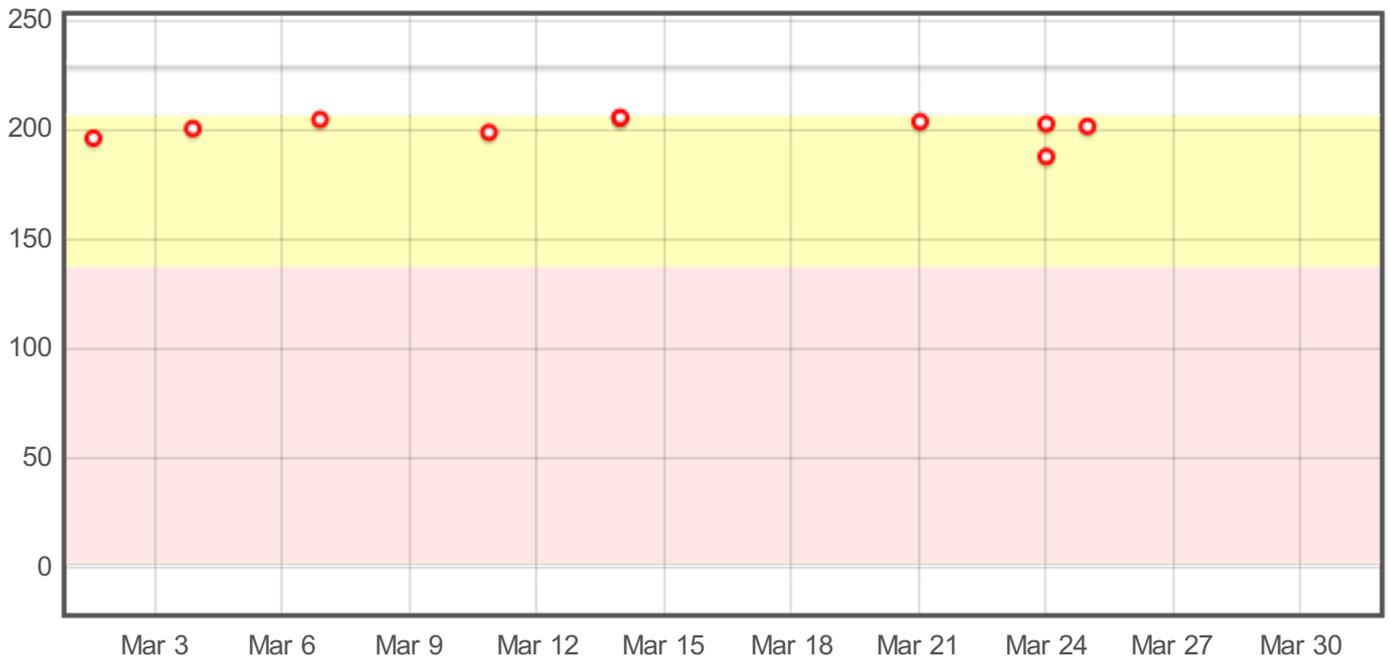
Events between 90%Un and 60%Un are "concern" events.

Events between 60%Un and 1%Un are "severe" events.

**Up to 1000 events per year is a normal condition**

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
90% - 80%	8	0	0	0	0	0	2	0	10
80% - 70%	0	0	0	0	0	0	0	0	0
70% - 60%	0	0	0	0	0	0	0	0	0
60% - 50%	0	0	0	0	0	0	0	0	0
50% - 40%	0	0	0	0	0	0	0	0	0
40% - 30%	0	0	0	0	0	0	0	0	0
30% - 20%	0	0	0	0	0	0	0	0	0
20% - 10%	0	0	0	0	0	0	0	0	0
10% - 1%	0	0	0	0	0	0	0	0	0
<b>Total concern</b>									<b>10</b>
<b>Total severe</b>									<b>0</b>
<b>Total</b>									<b>10</b>

## Line 3 supply voltage dips timeline



# Line 1 Supply Voltage interruptions

Supply voltage interruption test is based on the wave RMS values.

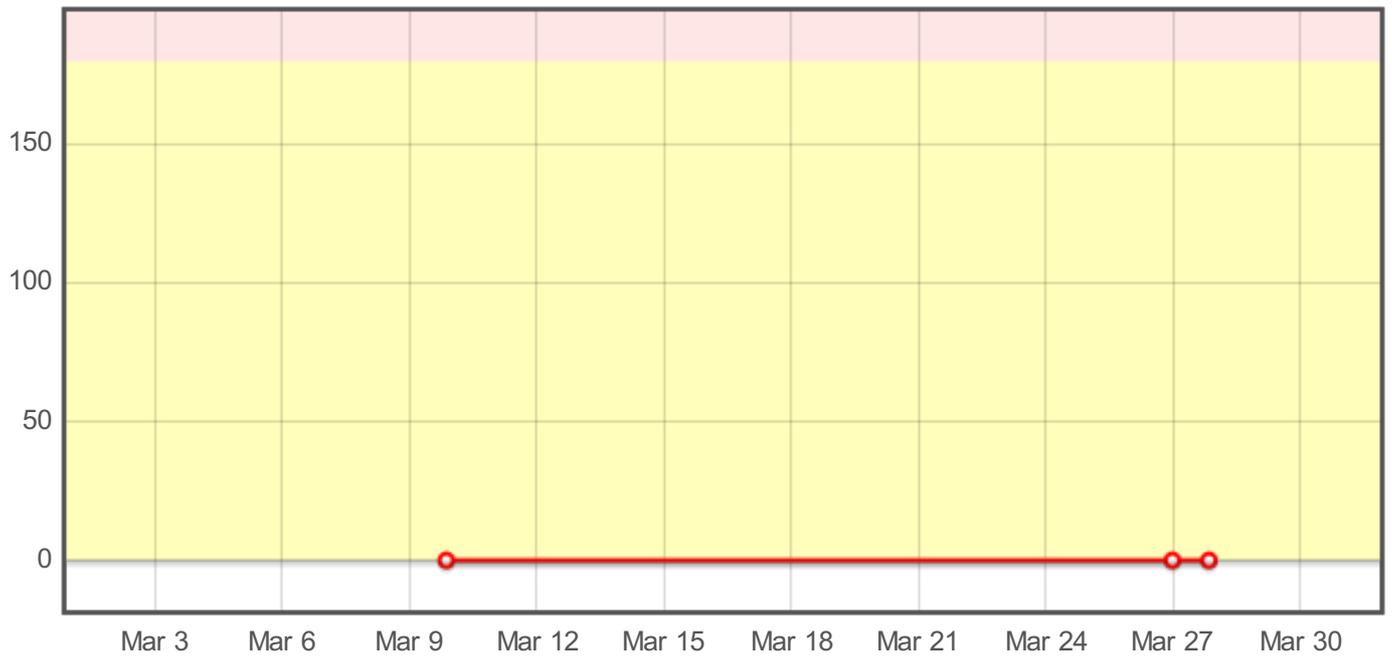
Interruption is a condition in which the supply voltage is reduced to a value less than 1%Un .

Short interruptions duration is up to 180 sec.

**Up to 1000 short interruptions and 50 long interruptions per year is a normal condition**

Seconds							
0 - 60	60 - 100	100 - 140	140 - 180	180 - 360	360 - 1000	> 1000	Σ
3	0	0	0	0	0	0	3

## Line 1 supply voltage interruptions timeline



## Line 2 Supply Voltage interruptions

Supply voltage interruption test is based on the wave RMS values.

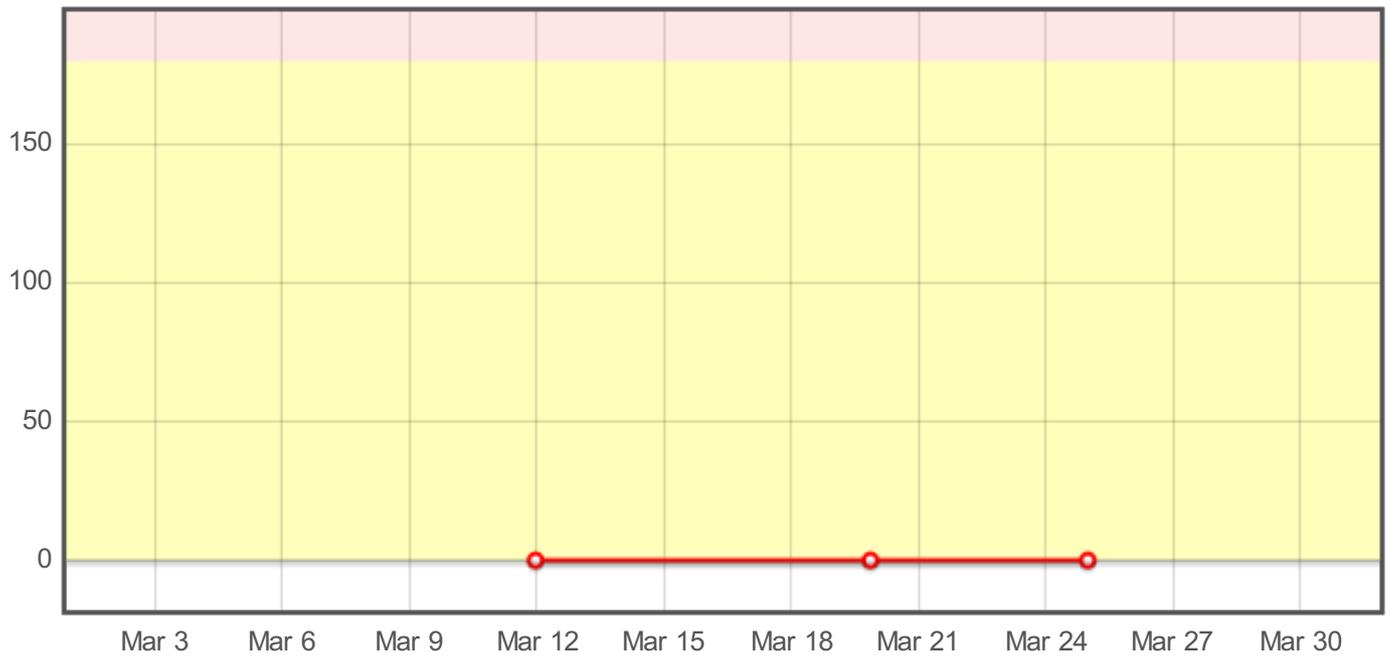
Interruption is a condition in which the supply voltage is reduced to a value less than 1%Un .

Short interruptions duration is up to 180 sec.

**Up to 1000 short interruptions and 50 long interruptions per year is a normal condition**

Seconds							
0 - 60	60 - 100	100 - 140	140 - 180	180 - 360	360 - 1000	> 1000	Σ
3	0	0	0	0	0	0	3

### Line 2 supply voltage interruptions timeline



## Line 3 Supply Voltage interruptions

Supply voltage interruption test is based on the wave RMS values.

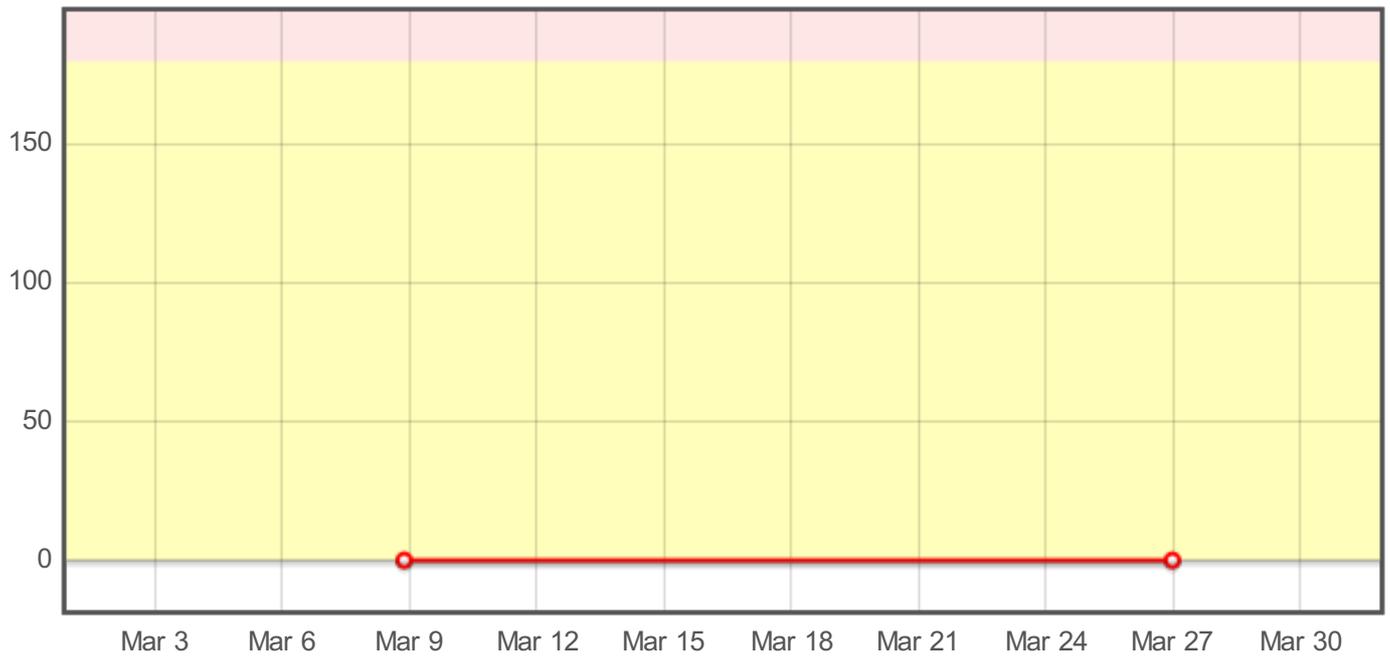
Interruption is a condition in which the supply voltage is reduced to a value less than 1%Un .

Short interruptions duration is up to 180 sec.

**Up to 1000 short interruptions and 50 long interruptions per year is a normal condition**

Seconds							
0 - 60	60 - 100	100 - 140	140 - 180	180 - 360	360 - 1000	> 1000	Σ
2	0	0	0	0	0	0	2

### Line 3 supply voltage interruptions timeline

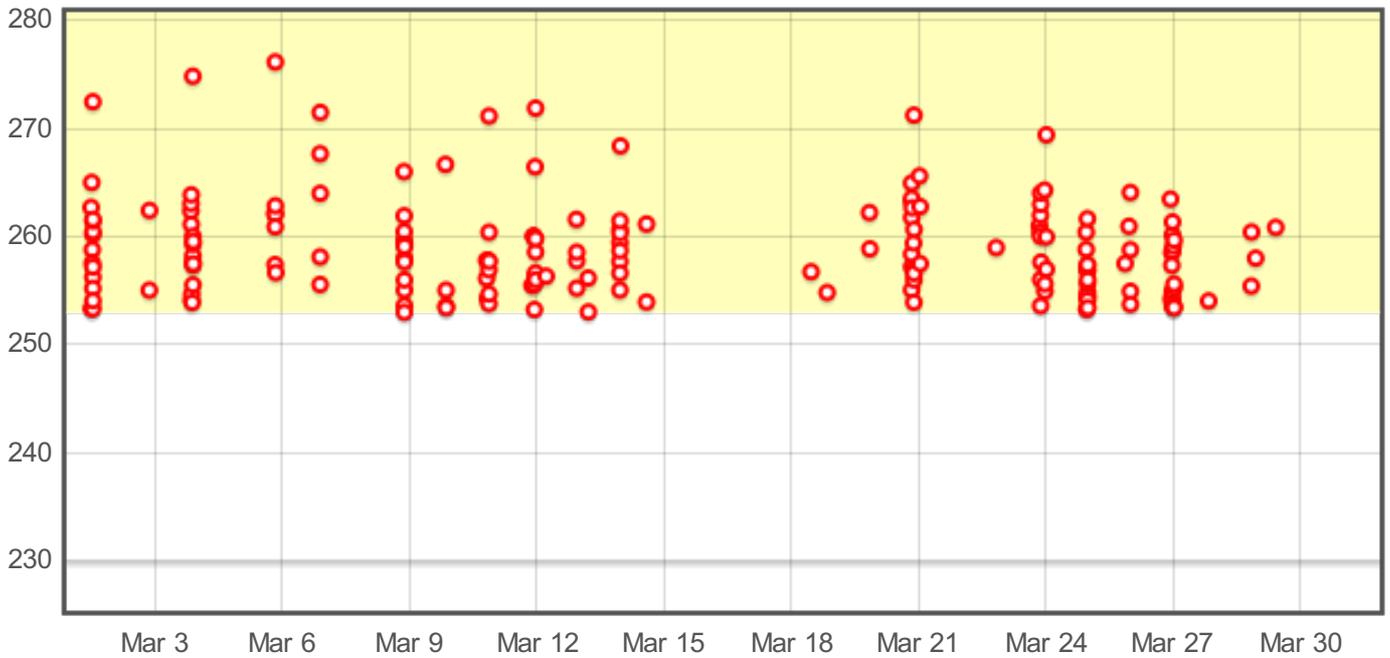


## Line 1 Over Voltages (Swell)

Over voltage (swell) test is based on the wave RMS values.  
 Over voltage is a condition in which the supply voltage is higher than 110% Un

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
180% - 170%	0	0	0	0	0	0	0	0	0
170% - 160%	0	0	0	0	0	0	0	0	0
160% - 150%	0	0	0	0	0	0	0	0	0
150% - 140%	0	0	0	0	0	0	0	0	0
140% - 130%	0	0	0	0	0	0	0	0	0
130% - 120%	1	0	0	0	0	0	0	0	1
120% - 110%	171	0	0	0	0	0	4	6	181
<b>Total</b>									<b>182</b>

### Line 1 supply over voltages (swell) timeline

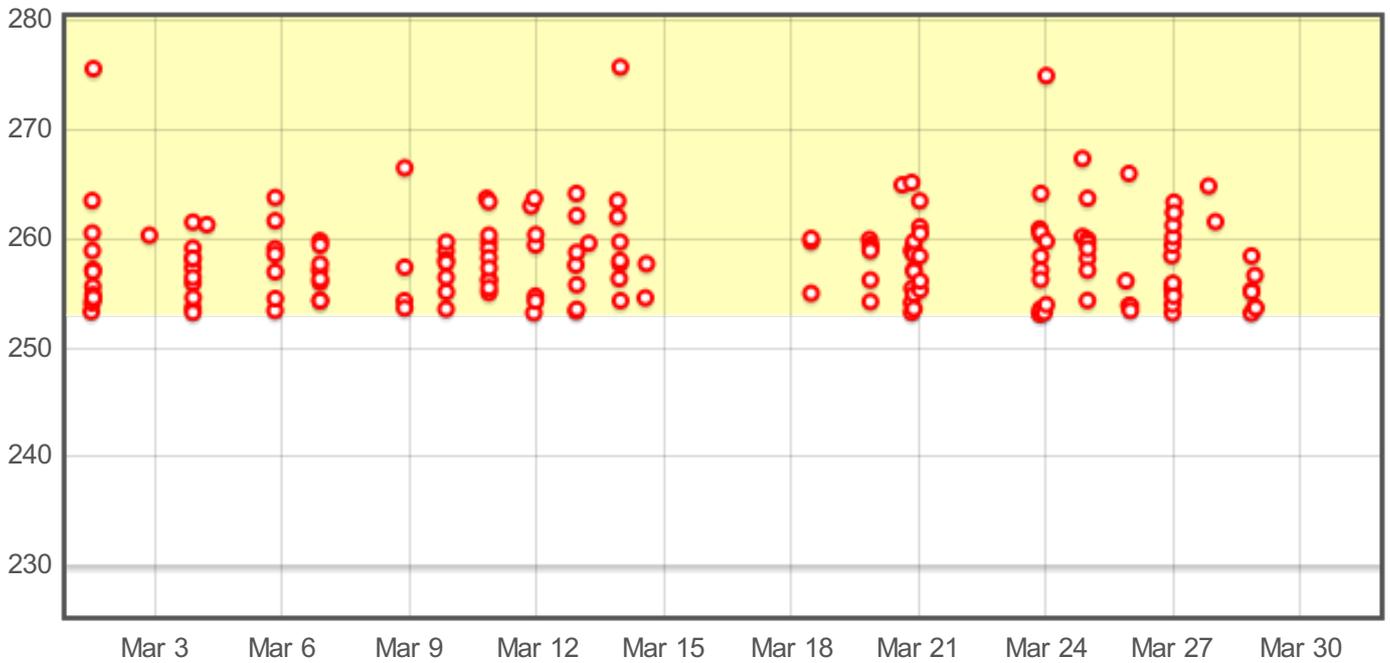


## Line 2 Over Voltages (Swell)

Over voltage (swell) test is based on the wave RMS values.  
 Over voltage is a condition in which the supply voltage is higher than 110% Un

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
180% - 170%	0	0	0	0	0	0	0	0	0
170% - 160%	0	0	0	0	0	0	0	0	0
160% - 150%	0	0	0	0	0	0	0	0	0
150% - 140%	0	0	0	0	0	0	0	0	0
140% - 130%	0	0	0	0	0	0	0	0	0
130% - 120%	0	0	0	0	0	0	0	0	0
120% - 110%	155	0	0	0	0	0	4	6	165
<b>Total</b>									<b>165</b>

### Line 2 supply over voltages (swell) timeline

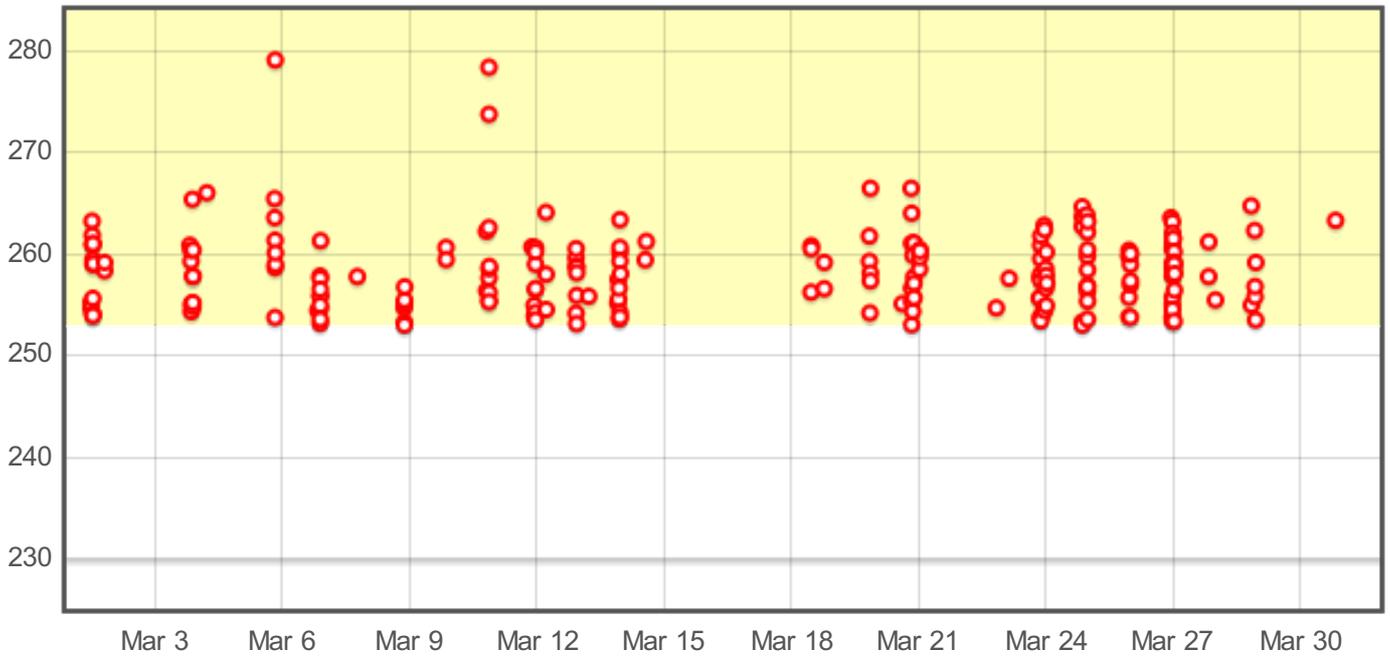


## Line 3 Over Voltages (Swell)

Over voltage (swell) test is based on the wave RMS values.  
 Over voltage is a condition in which the supply voltage is higher than 110% Un

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
180% - 170%	0	0	0	0	0	0	0	0	0
170% - 160%	0	0	0	0	0	0	0	0	0
160% - 150%	0	0	0	0	0	0	0	0	0
150% - 140%	0	0	0	0	0	0	0	0	0
140% - 130%	0	0	0	0	0	0	0	0	0
130% - 120%	2	0	0	0	0	0	0	0	2
120% - 110%	208	0	0	0	0	0	8	4	220
<b>Total</b>									<b>222</b>

### Line 3 supply over voltages (swell) timeline



# Supply Voltage unbalanced

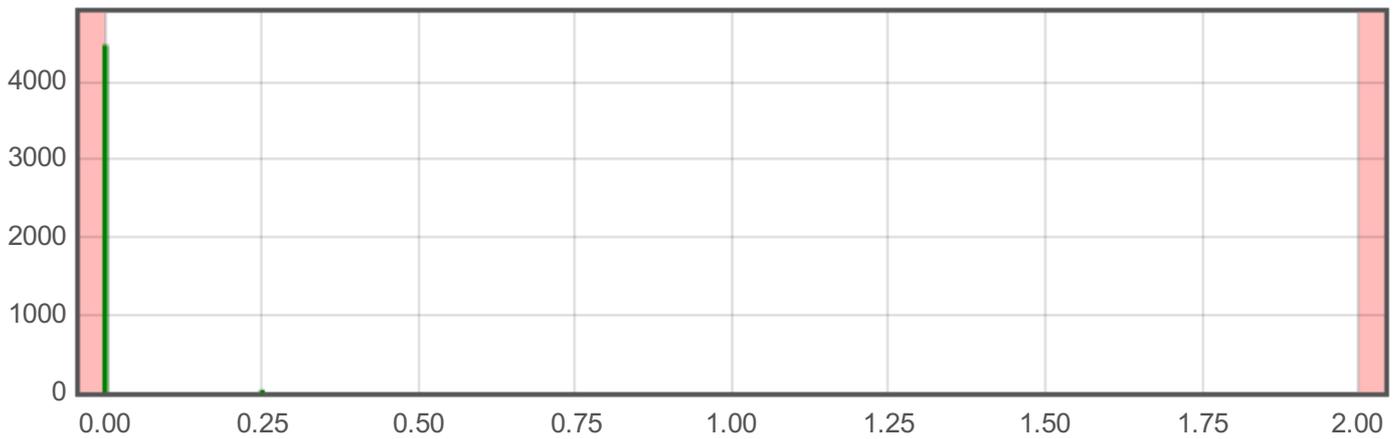
The test is based on 10 minutes mean RMS values of the supply voltage.

Unbalance is the condition in which the RMS values of the phase voltages or the phase angles between consecutive phases are not equal.

The system calculates the Negative AND Positive sequence components.

The Permissible Voltage unbalance should be less than 2% 95% of the time .

Description	Required value	Test Result
Avg. RMS (%)	0	0.08
Minimum permissible (%)	0	0.00
Maximum permissible (%)	2	0.28
Permissible percent outside range	5 %	0.00 %
Number of samples		4458
Number of samples inside range		4458
Number of samples outside range		0
Minimum RMS (%)		0.00
Maximum RMS (%)		0.28
Percentage samples inside range		100.00 %
Percentage samples outside range		0.00 %
Result		Passed

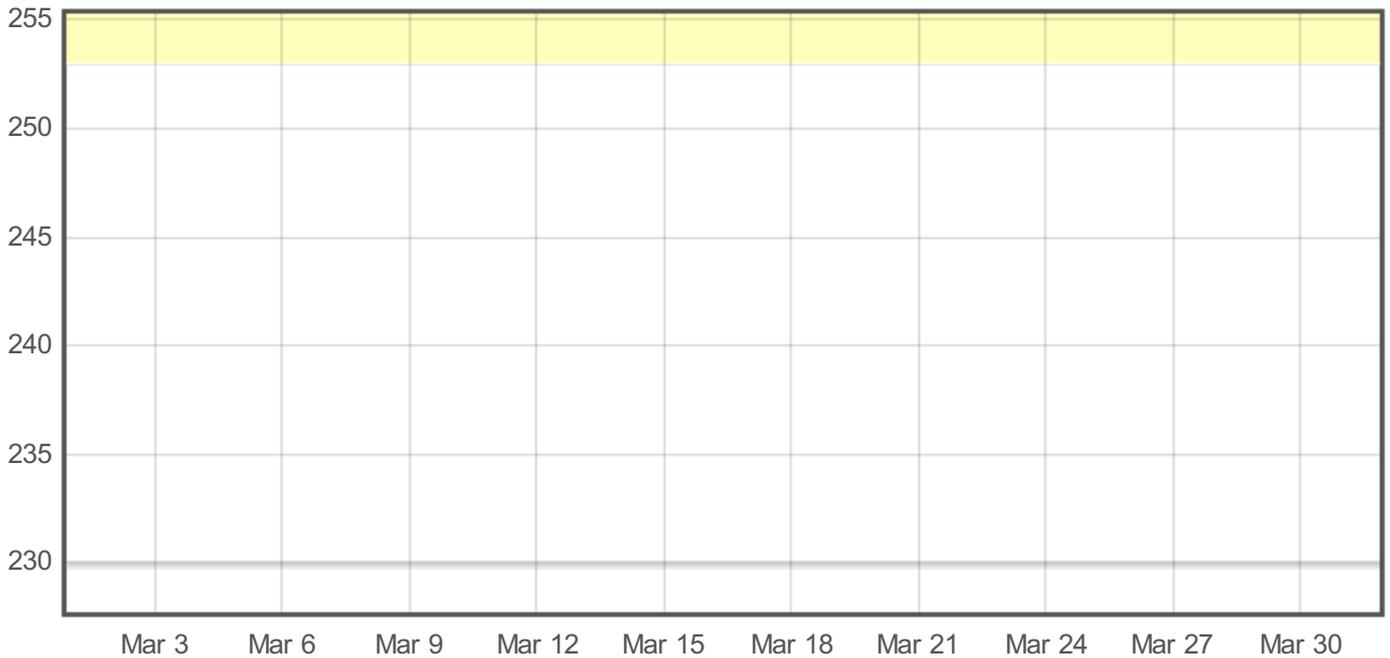


# Line 1 Transient Over Voltage

Supply voltage transient test is based on the wave voltage values.  
 Voltage transient is a condition in which the wave voltage values > 110% Un

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
170% - 165%	0	0	0	0	0	0	0	0	0
165% - 160%	0	0	0	0	0	0	0	0	0
160% - 155%	0	0	0	0	0	0	0	0	0
155% - 150%	0	0	0	0	0	0	0	0	0
150% - 145%	0	0	0	0	0	0	0	0	0
145% - 140%	0	0	0	0	0	0	0	0	0
140% - 135%	0	0	0	0	0	0	0	0	0
135% - 130%	0	0	0	0	0	0	0	0	0
130% - 125%	0	0	0	0	0	0	0	0	0
125% - 120%	0	0	0	0	0	0	0	0	0
120% - 115%	0	0	0	0	0	0	0	0	0
115% - 110%	0	0	0	0	0	0	0	0	0
110% - 105%	0	0	0	0	0	0	0	0	0
<b>Total</b>									<b>0</b>

## Line 1 supply transient over voltages timeline

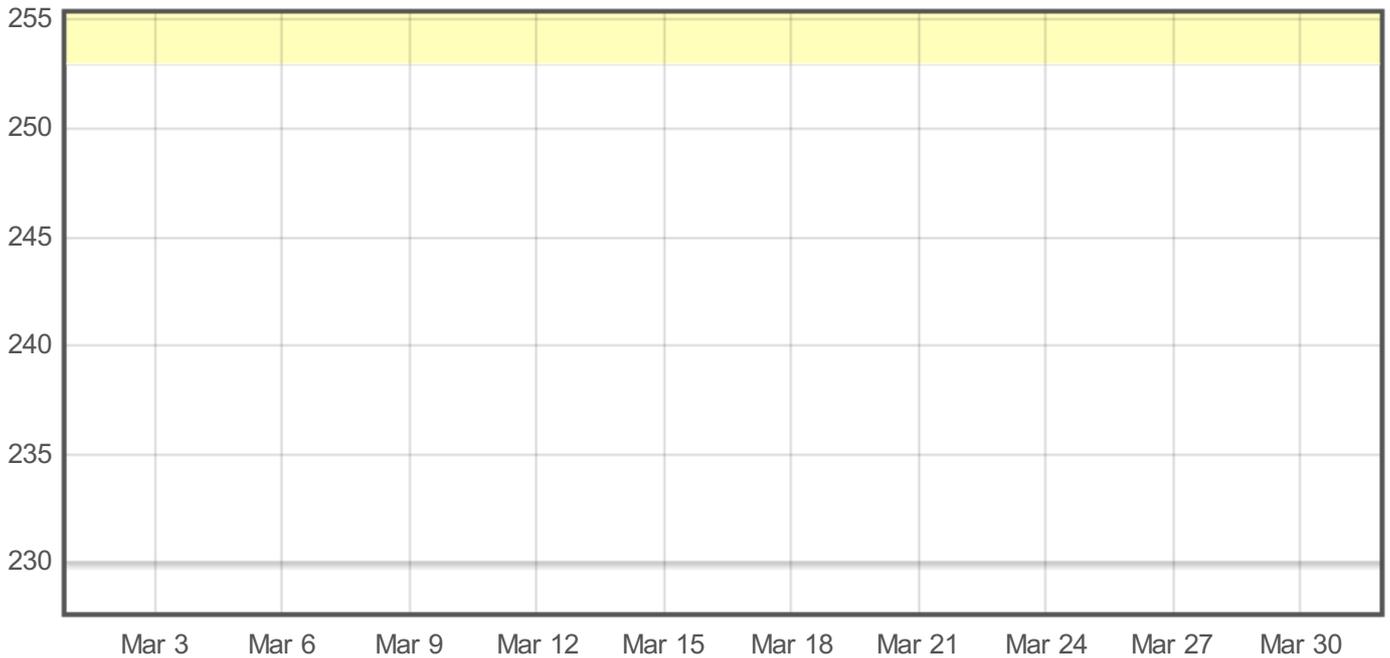


## Line 2 Transient Over Voltage

Supply voltage transient test is based on the wave voltage values.  
 Voltage transient is a condition in which the wave voltage values > 110% Un

% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
170% - 165%	0	0	0	0	0	0	0	0	0
165% - 160%	0	0	0	0	0	0	0	0	0
160% - 155%	0	0	0	0	0	0	0	0	0
155% - 150%	0	0	0	0	0	0	0	0	0
150% - 145%	0	0	0	0	0	0	0	0	0
145% - 140%	0	0	0	0	0	0	0	0	0
140% - 135%	0	0	0	0	0	0	0	0	0
135% - 130%	0	0	0	0	0	0	0	0	0
130% - 125%	0	0	0	0	0	0	0	0	0
125% - 120%	0	0	0	0	0	0	0	0	0
120% - 115%	0	0	0	0	0	0	0	0	0
115% - 110%	0	0	0	0	0	0	0	0	0
110% - 105%	0	0	0	0	0	0	0	0	0
<b>Total</b>									<b>0</b>

### Line 2 supply transient over voltages timeline

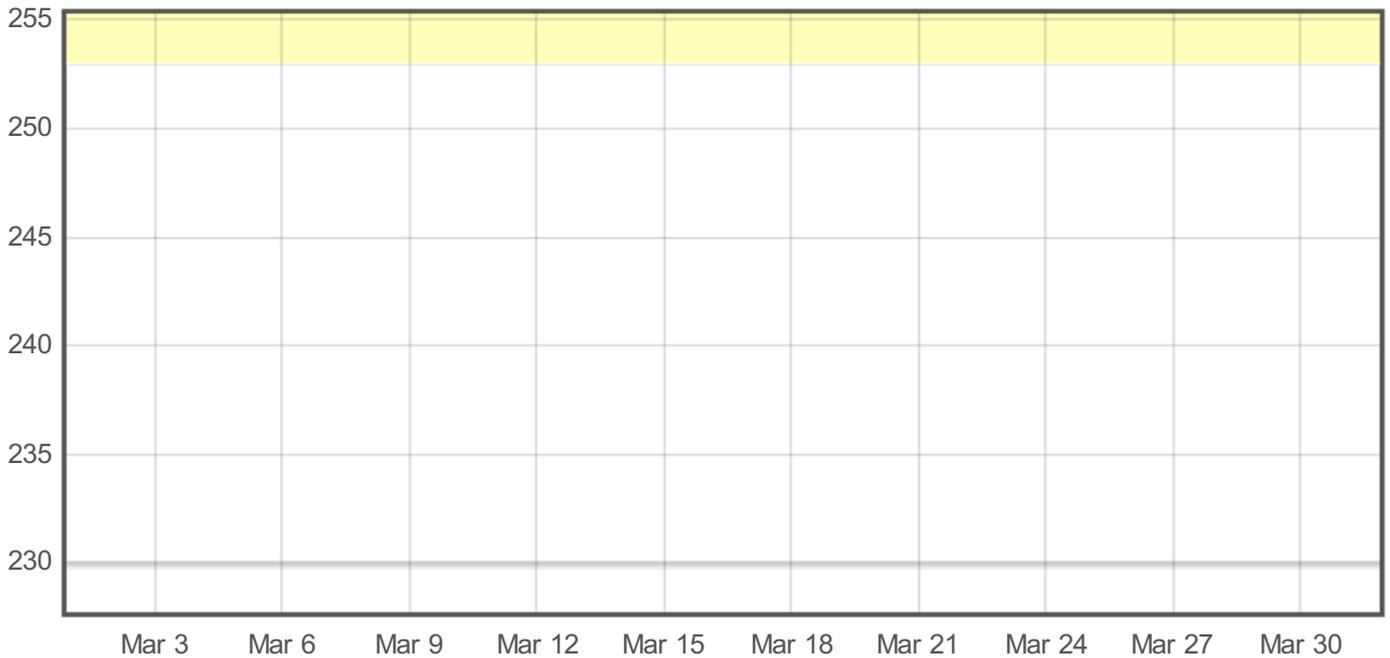


## Line 3 Transient Over Voltage

Supply voltage transient test is based on the wave voltage values.  
 Voltage transient is a condition in which the wave voltage values > 110% Un

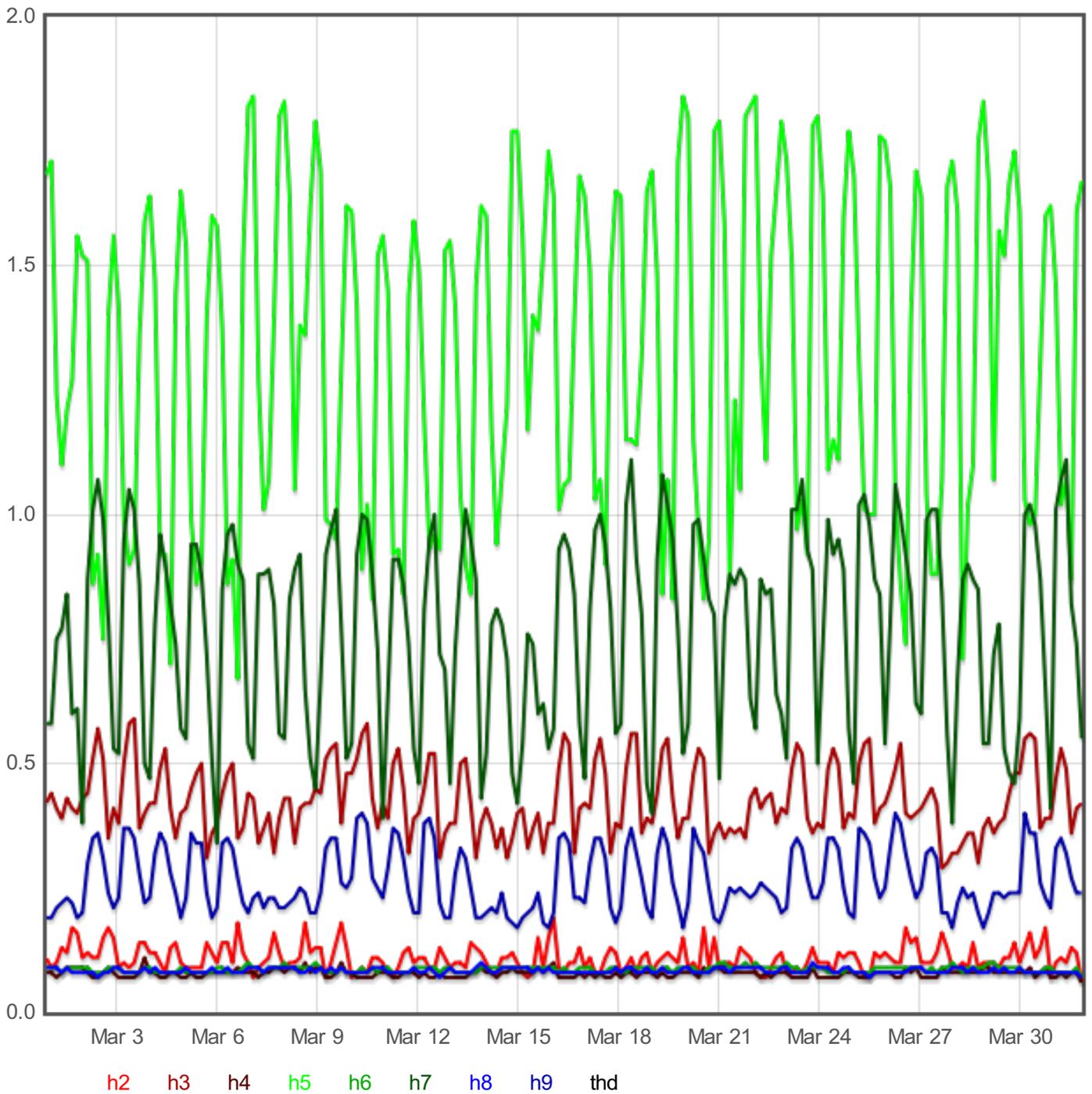
% Un	Seconds								Total
	< 0.1	0.1 - 0.5	0.5 - 1	1 - 3	3 - 20	20 - 60	60 - 180	> 180	
170% - 165%	0	0	0	0	0	0	0	0	0
165% - 160%	0	0	0	0	0	0	0	0	0
160% - 155%	0	0	0	0	0	0	0	0	0
155% - 150%	0	0	0	0	0	0	0	0	0
150% - 145%	0	0	0	0	0	0	0	0	0
145% - 140%	0	0	0	0	0	0	0	0	0
140% - 135%	0	0	0	0	0	0	0	0	0
135% - 130%	0	0	0	0	0	0	0	0	0
130% - 125%	0	0	0	0	0	0	0	0	0
125% - 120%	0	0	0	0	0	0	0	0	0
120% - 115%	0	0	0	0	0	0	0	0	0
115% - 110%	0	0	0	0	0	0	0	0	0
110% - 105%	0	0	0	0	0	0	0	0	0
<b>Total</b>									<b>0</b>

### Line 3 supply transient over voltages timeline



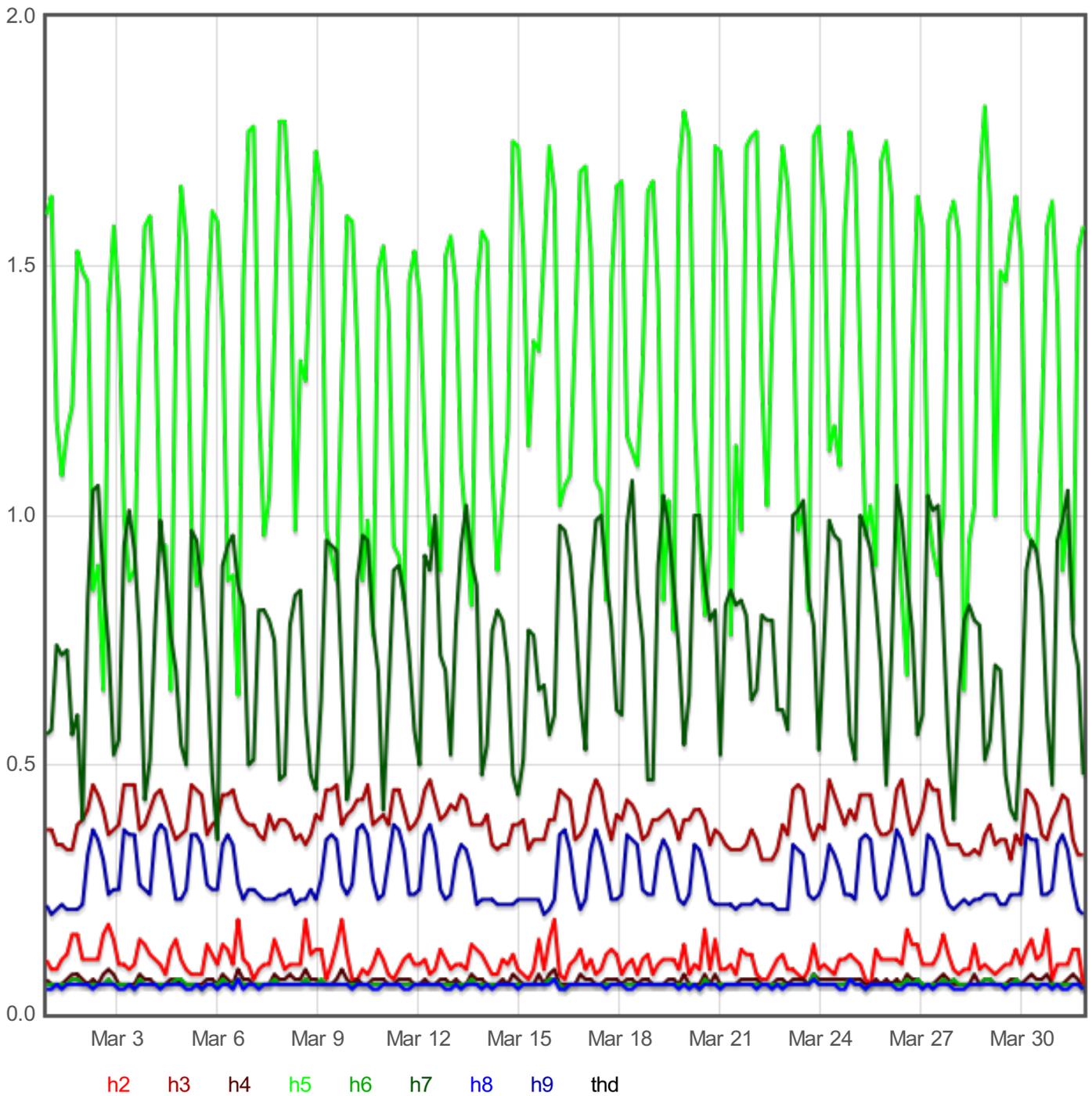
# Line 1 harmonic voltage

The test is based on 10 minutes Mean Harmonics values of the supply voltage. The line must keep itself within boundaries 95% of the time



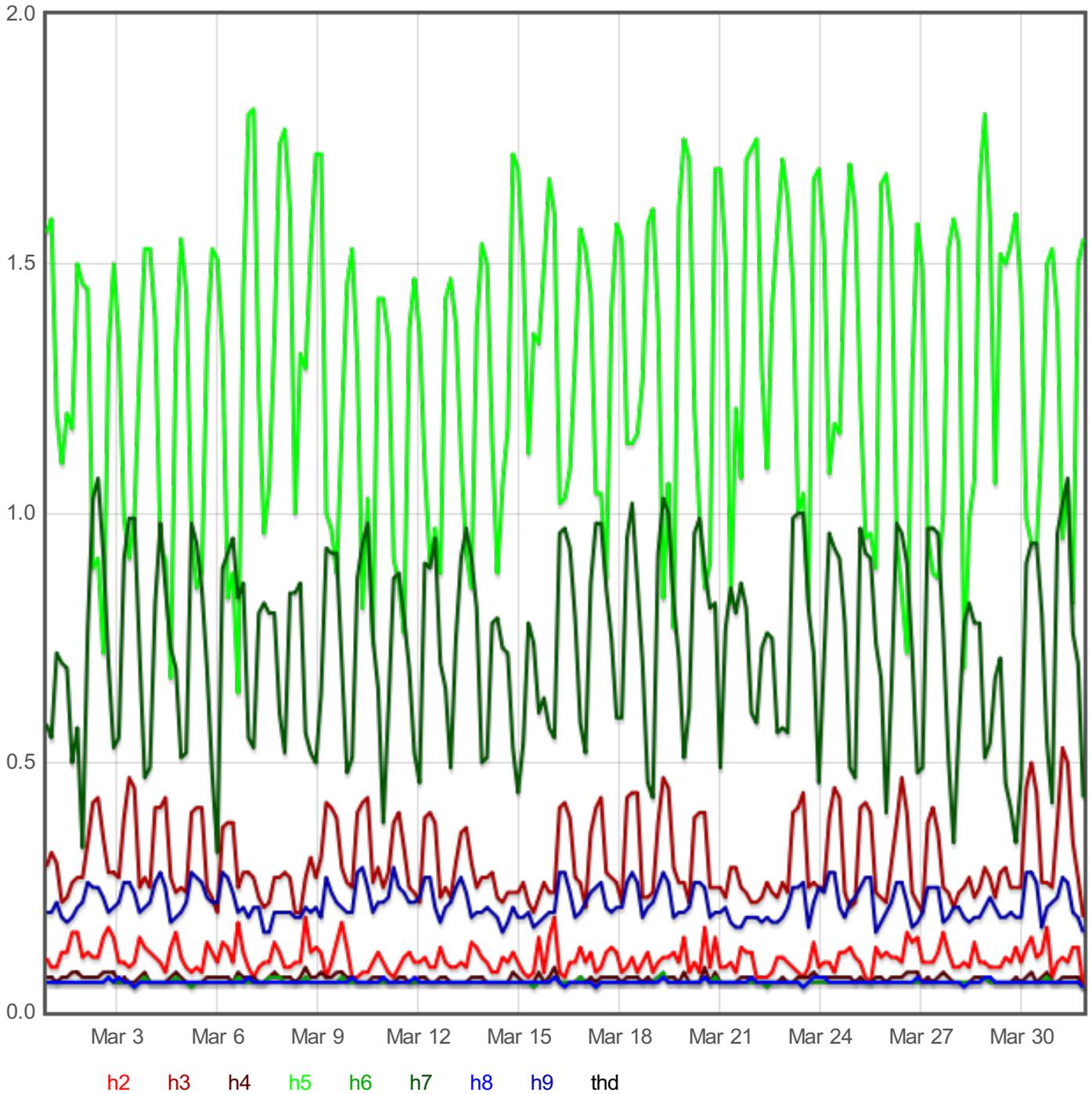
## Line 2 harmonic voltage

The test is based on 10 minutes Mean Harmonics values of the supply voltage. The line must keep itself within boundaries 95% of the time



## Line 3 harmonic voltage

The test is based on 10 minutes Mean Harmonics values of the supply voltage. The line must keep itself within boundaries 95% of the time



# Harminics Test

The test is based on 10 minutes Mean Harmonics values of the supply voltage. The line must keep itself within boundaries 95% of the time

Harmonic Number (boundaries)	Line 1	Line 2	Line 3
THD (<8%)	00.00	00.00	00.00
2 (<2%)	00.00	00.00	00.00
3 (<5%)	00.00	00.00	00.00
4 (<1%)	00.00	00.00	00.00
5 (<6%)	00.00	00.00	00.00
6 (<0.5%)	00.00	00.00	00.00
7 (<5%)	00.00	00.00	00.00
8 (<0.5%)	00.00	00.00	00.00
9 (<1.5%)	00.00	00.00	00.00
10 (<0.5%)	00.00	00.00	00.00
11 (<3.5%)	00.00	00.00	00.00
12 (<0.5%)	00.00	00.00	00.00
13 (<3%)	00.00	00.00	00.00
14 (<0.5%)	00.00	00.00	00.00
15 (<0.5%)	00.00	00.00	00.00
16 (<0.5%)	00.00	00.00	00.00
17 (<2%)	00.00	00.00	00.00
18 (<0.5%)	00.00	00.00	00.00
19 (<1.5%)	00.00	00.00	00.00
20 (<0.5%)	00.00	00.00	00.00
21 (<0.5%)	00.00	00.00	00.00
22 (<0.5%)	00.00	00.00	00.00
23 (<1.5%)	00.00	00.00	00.00
24 (<0.5%)	00.00	00.00	00.00
25 (<1.5%)	00.00	00.00	00.00