



Logging Report Prepared for: JNF Electrical

Results from metering equipment installed at 60 Amp Supply.

Metering Point: 60 Amp Breaker

Recording period: 21/05/2021 15H00 to 28/05/2021 10H00

Equipment Used:

QualiTrack 3 Three Phase Quality of Supply & Profile Recorder.

Averaging period: 60 Seconds.

Peak detection set at 40 milliseconds.

Recording Methodology

The recorder used is configured to measure the Line to Neutral voltage for each of the three phases as well as all the load and energy parameters (currents, powers, power factor and frequency)

The following parameters are recorded:

- 1) Average voltage over a 60 second integration period.
- 2) In that 60 second period the lowest and the highest 40 millisecond (2 cycle) value is stored.
- 3) Record dips as well as swells continuously.
- 4) Record up to the 19th Voltage harmonic.
- 5) Power parameters

Classification of a Dip

A dip is classified as a sudden reduction of the nominal voltage. The recorder will record and store the dip values as soon as the nominal voltage fall below 10% or more of declared nominal voltage for 10 milliseconds or longer. These values are stored in nonvolatile memory and can be retrieved for graphical display.

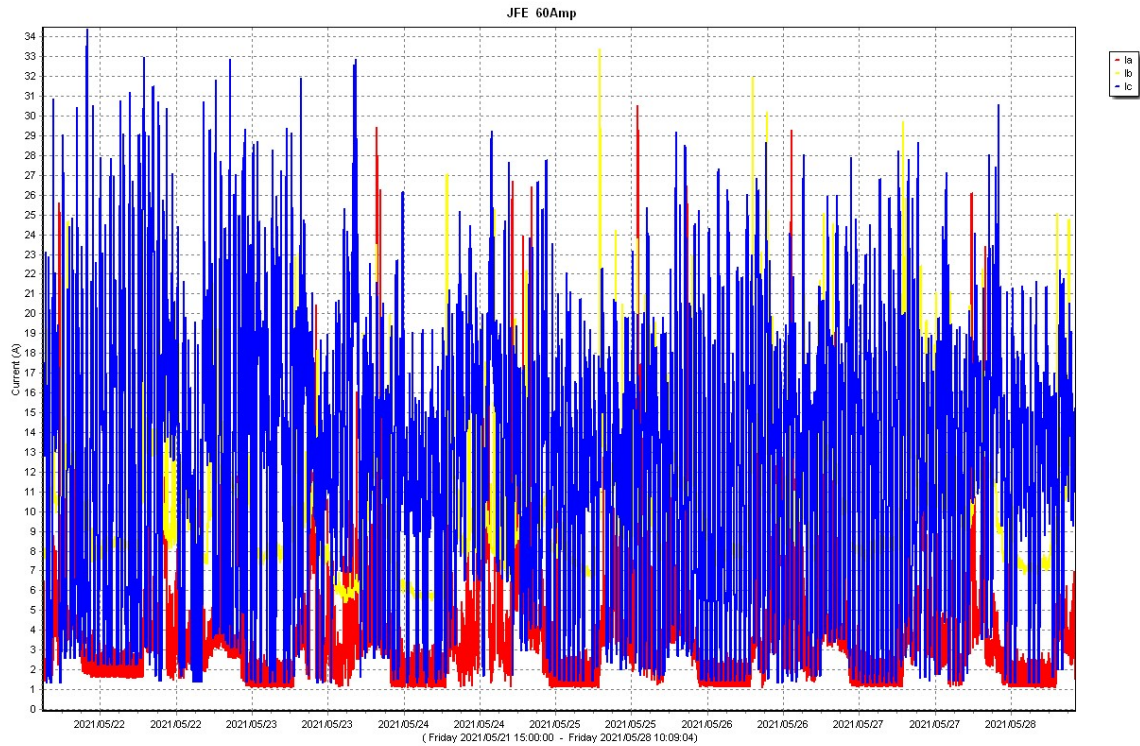
Classification of a Swell.

A swell is measured in the same way as a dip, but is just classified as a sudden increase of voltage with more than 10% of nominal for more than 10 milliseconds.

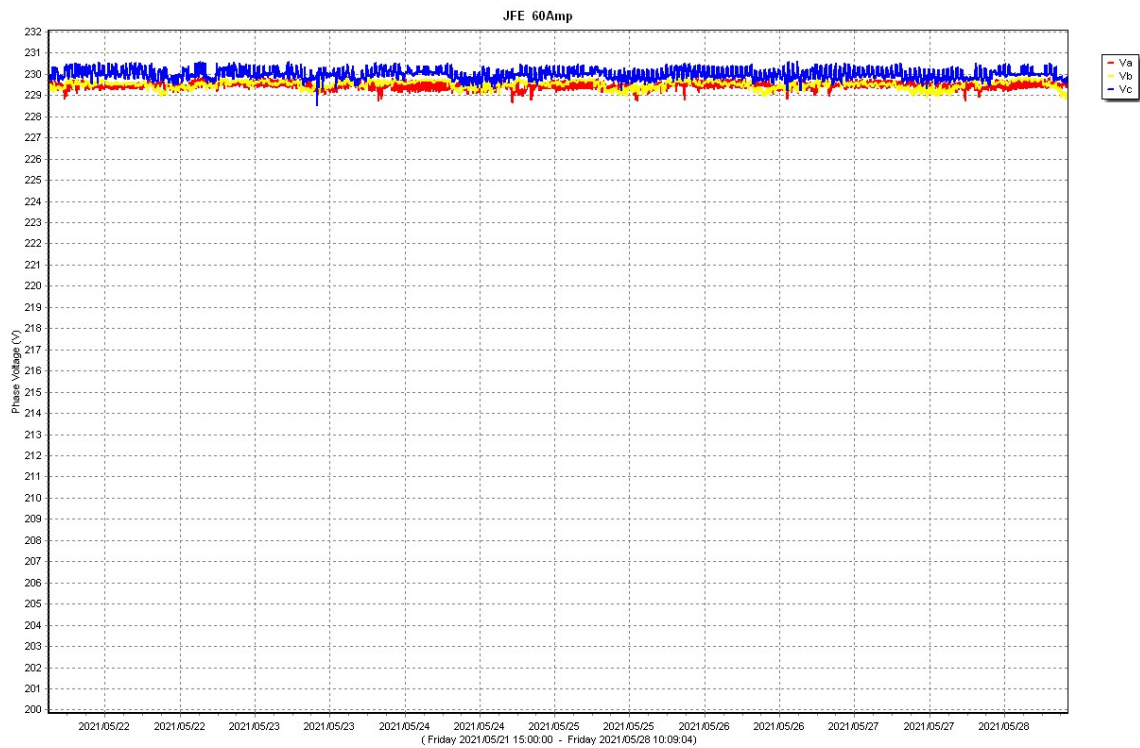
The following information is included for this point.

- 1) A graph showing the current for the complete recording period.
- 2) A graph showing the voltage over a 1minute averaging interval for complete recording period.
- 3) A graph showing the voltage over a 1minute averaging interval with the highest and lowest values calculated over a 2cycle period for complete recording period
- 4) A zoomed graph showing the voltage over a 1minute averaging interval with the highest and lowest values calculated over a 2cycle period
- 5) A Table giving the statistics for the complete recording period.
- 6) A zoomed graph showing the current for time of maximum current demand.
- 7) A zoomed graph showing the summed kW, kVA and kVAR for time of maximum load demand.
- 8) A graph of the frequency over the complete recording period.
- 9) Dip info
- 10) Swell info.

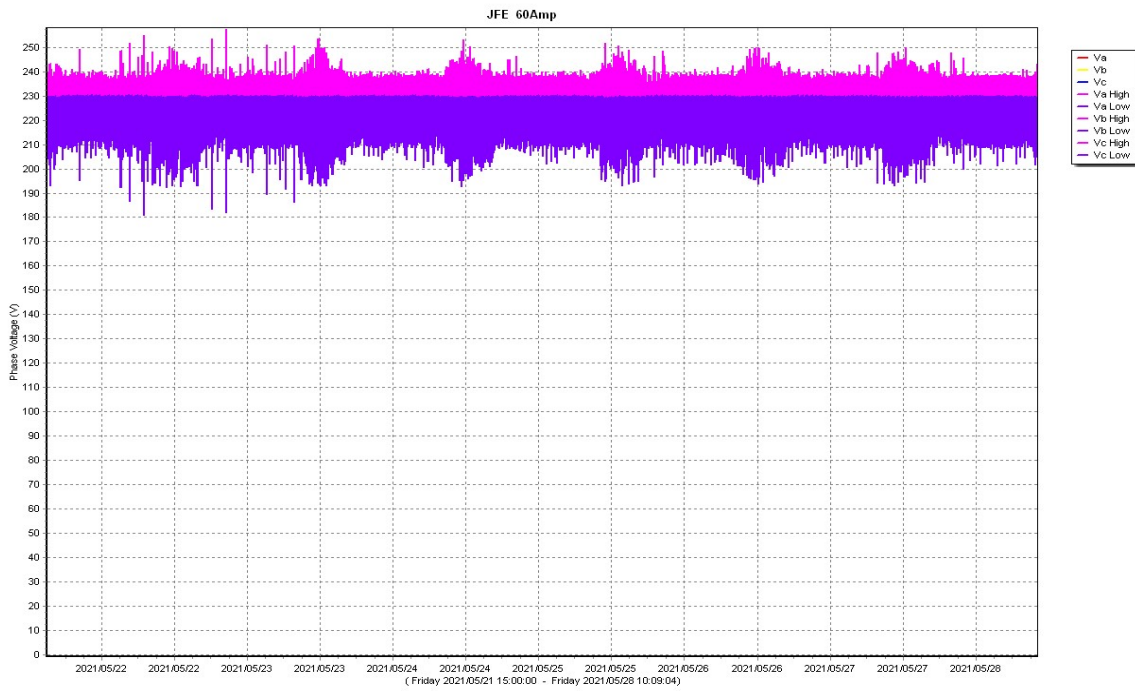
Main



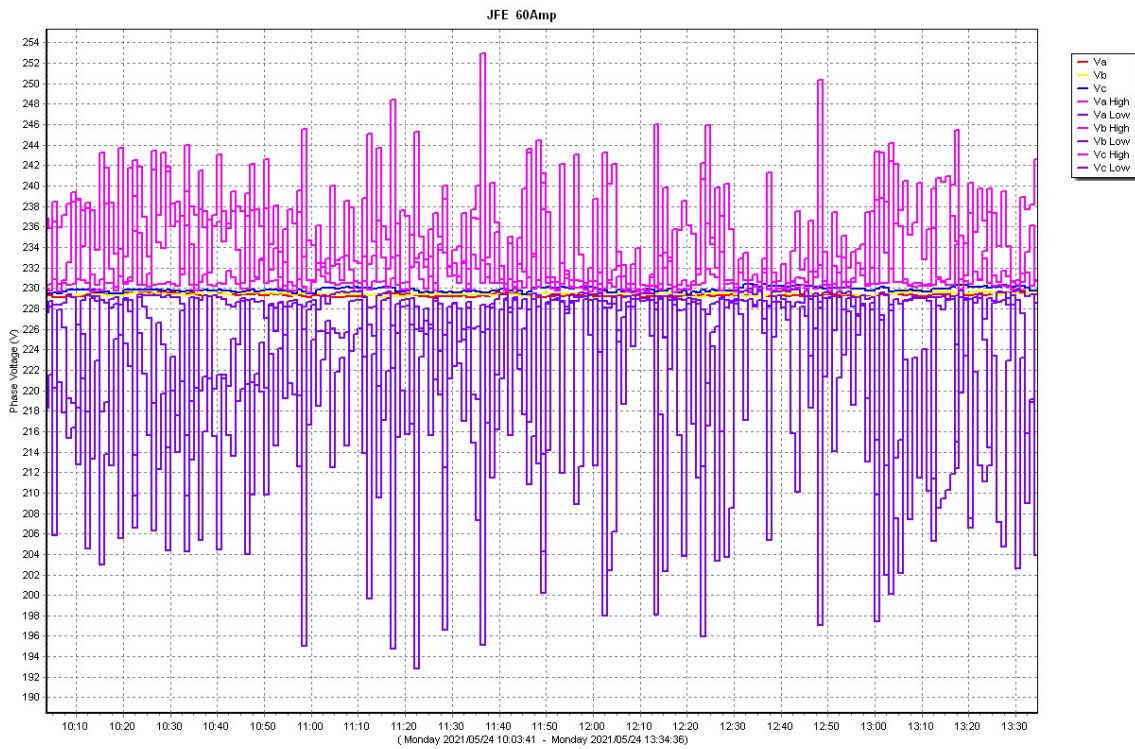
Graph showing the current profile for complete recording period



Graph Showing the Voltage profiles with a 1minute average



Graph Showing the Voltage profiles with a 2 cycle Peaks and Dips



Zoomed Graph Showing the Voltage profiles with a 2 cycle Peaks and Dips

(Please note that the Pink traces is the highest 2 cycle values and the purple trace is the lowest 2 cycle values recorded)

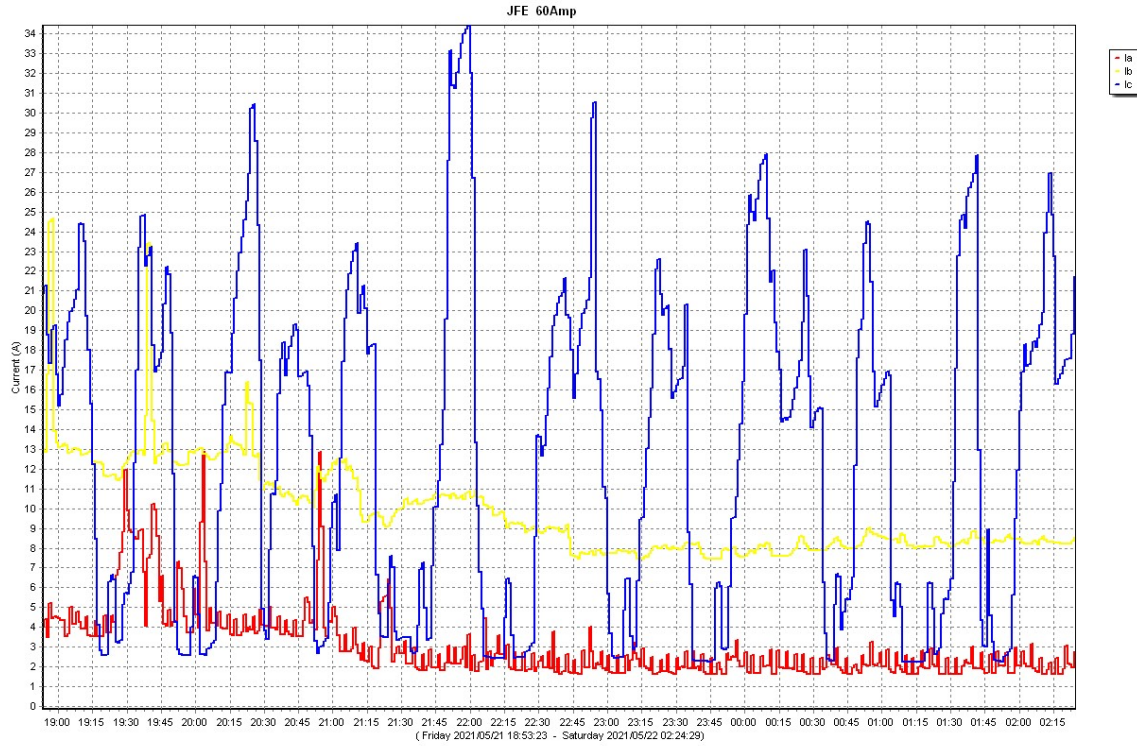
Statistics for complete recording period

Information	Parameter	Date & Time	Value	Unit
Description	JFE			
Feeder	60Amp			
Graph Statistics	Recording Start	2021/05/21 15:00:00		
	Recording End	2021/05/28 10:00:00		
	Recording Period	6 Days 19 Hours 0 Minutes		
	Averaging Interval	1 Minute		
Phase Voltage	Phase A Maximum Va	2021/05/23 14:19:00	229.9	V
	Phase B Maximum Vb	2021/05/22 19:10:00	229.9	V
	Phase C Maximum Vc	2021/05/26 14:52:00	230.6	V
	Phase A Maximum Instant Va	2021/05/26 13:58:00	247.7	V
	Phase B Maximum Instant Vb	2021/05/25 12:27:00	247.5	V
	Phase C Maximum Instant Vc	2021/05/22 20:36:00	257.4	V
	Phase A Minimum Va	2021/05/24 17:17:00	228.6	V
	Phase B Minimum Vb	2021/05/28 09:54:00	228.9	V
	Phase C Minimum Vc	2021/05/23 09:59:00	228.5	V
	Phase A Minimum Instant Va	2021/05/22 13:43:00	199.9	V
	Phase B Minimum Instant Vb	2021/05/25 10:36:00	202.9	V
	Phase C Minimum Instant Vc	2021/05/22 07:01:00	180.7	V
	Va Average		229.5	V
	Vb Average		229.5	V
	Vc Average		230.0	V
Line Voltage	Phase AB Maximum Vab	2021/05/27 09:44:00	404.6	V
	Phase BC Maximum Vbc	2021/05/21 15:22:00	399.3	V
	Phase CA Maximum Vca	2021/05/21 17:36:00	402.5	V
	Phase AB Maximum Instant Vab	2021/05/27 20:01:00	420.4	V
	Phase BC Maximum Instant Vbc	2021/05/22 20:36:00	419.9	V
	Phase CA Maximum Instant Vca	2021/05/22 20:36:00	420.3	V
	Phase AB Minimum Vab	2021/05/26 13:18:00	395.0	V
	Phase BC Minimum Vbc	2021/05/23 07:32:00	390.7	V
	Phase CA Minimum Vca	2021/05/25 14:37:00	392.1	V
	Phase AB Minimum Instant Vab	2021/05/24 14:43:00	365.1	V
	Phase BC Minimum Instant Vbc	2021/05/22 07:01:00	354.4	V
	Phase CA Minimum Instant Vca	2021/05/22 07:01:00	355.8	V
	Vab Average		401.1	V
	Vbc Average		395.4	V
	Vca Average		396.7	V
Current	Phase A Maximum Ia	2021/05/25 13:00:00	30.51	A
	Phase B Maximum Ib	2021/05/25 07:04:00	33.41	A
	Phase C Maximum Ic	2021/05/21 22:00:00	34.39	A
	Phase A Maximum Instant Ia	2021/05/25 12:59:00	44.19	A
	Phase B Maximum Instant Ib	2021/05/25 07:04:00	40.90	A

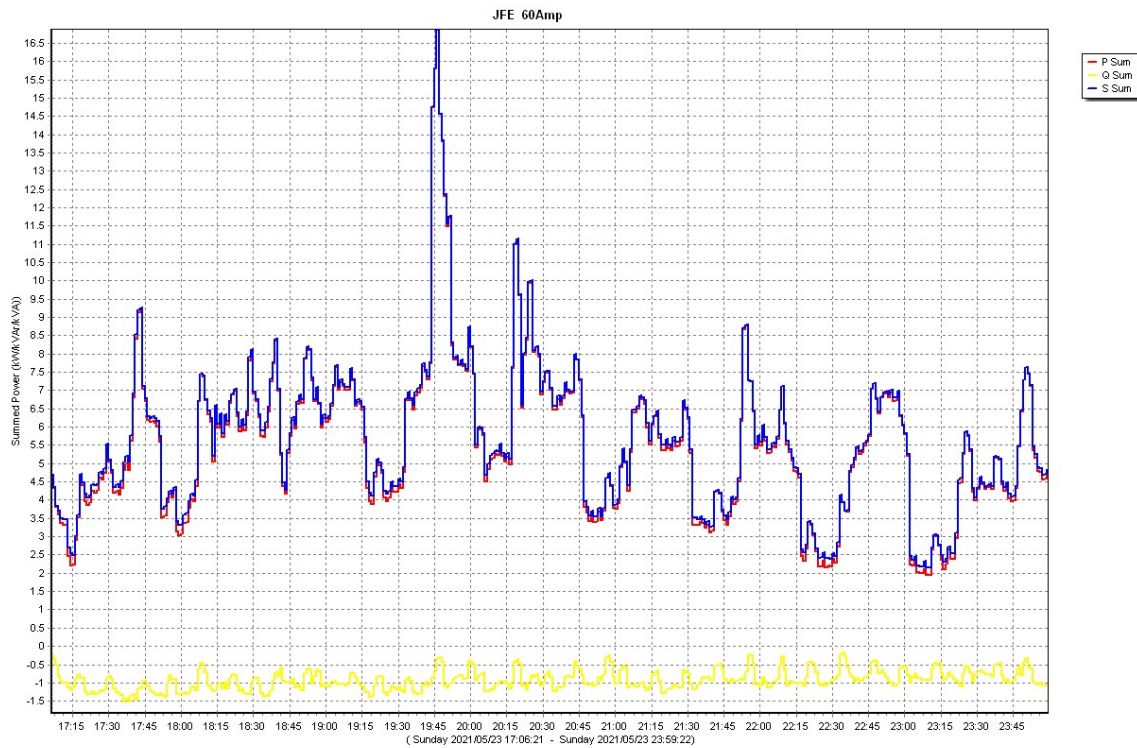
	Phase C Maximum Instant Ic	2021/05/22 10:35:00	54.92	A
	Phase A Minimum Ia	2021/05/28 05:02:00	1.103	A
	Phase B Minimum Ib	2021/05/24 05:20:00	5.371	A
	Phase C Minimum Ic	2021/05/28 02:53:00	1.321	A
	Ia Average		3.815	A
	Ib Average		9.771	A
	Ic Average		12.36	A
Max Load Unbalance	Nominal Current	2021/05/25 13:00:00	32.77	A
	Phase A Current		30.51	A
	Phase B Current		33.41	A
	Phase C Current		34.39	A
Max Phase Unbalance	Nominal Current	2021/05/21 22:00:00	28.22	A
	Phase A Current		25.59	A
	Phase B Current		24.67	A
	Phase C Current		34.39	A
Active Power	Phase A Maximum	2021/05/25 13:00:00	6.963	kW
	Phase B Maximum	2021/05/25 07:04:00	7.575	kW
	Phase C Maximum	2021/05/21 22:00:00	7.895	kW
	Phase A Minimum	2021/05/24 01:53:00	0.185	kW
	Phase B Minimum	2021/05/23 14:59:00	1.025	kW
	Phase C Minimum	2021/05/28 02:53:00	0.247	kW
	Ph A Active Power Average		0.848	kW
	Ph B Active Power Average		2.111	kW
	Ph C Active Power Average		2.826	kW
Reactive Power	Phase A Maximum	2021/05/24 12:47:00	0.805	kVAr
	Phase B Maximum	2021/05/25 11:12:00	-0.506	kVAr
	Phase C Maximum	2021/05/24 09:08:00	0.646	kVAr
	Phase A Minimum	2021/05/26 18:33:00	-0.544	kVAr
	Phase B Minimum	2021/05/26 09:25:00	-1.442	kVAr
	Phase C Minimum	2021/05/24 21:30:00	-0.360	kVAr
	Ph A Reactive Power Average		-0.043	kVAr
	Ph B Reactive Power Average		-0.735	kVAr
	Ph C Reactive Power Average		-0.049	kVAr

Apparent Power	Phase A Maximum	2021/05/25 13:00:00	6.981	kVA
	Phase B Maximum	2021/05/25 07:04:00	7.657	kVA
	Phase C Maximum	2021/05/21 22:00:00	7.895	kVA
	Phase A Minimum	2021/05/23 01:03:00	0.246	kVA
	Phase B Minimum	2021/05/24 05:20:00	1.234	kVA
	Phase C Minimum	2021/05/21 16:12:00	0.304	kVA
	Ph A Apparent Power Average		0.868	kVA
	Ph B Apparent Power Average		2.241	kVA
	Ph C Apparent Power Average		2.840	kVA
Power Factor	Ph A Powerfactor Average		-0.977	
	Ph B Powerfactor Average		-0.942	
	Ph c Powerfactor Average		-0.995	
Maximum Demand kW	Active Power	2021/05/23 19:47:00	16.854	kW
	Apparent Power		16.857	kVA
	Reactive Power		0.000	kVAr
	Power Factor		-1.000	
Maximum Demand kVA	Apparent Power	2021/05/23 19:47:00	16.857	kVA
	Active Power		16.854	kW
	Reactive Power		0.000	kVAr
	Power Factor		-1.000	
Energy	Import Active Energy		943.1	kWh
	Import Active Energy Phase A		138.2	kWh
	Import Active Energy Phase B		344.2	kWh
	Import Active Energy Phase C		460.7	kWh
	Export Active Energy		0.0	kWh
	Export Active Energy Phase A		0.0	kWh
	Export Active Energy Phase B		0.0	kWh
	Export Active Energy Phase C		0.0	kWh
	Inductive Reactive Energy		0.1	kVArh
	Capacitive Reactive Energy		135.0	kVArh
Load Factor kW	(Avg kW)/(Max kW)		0.340	
Load Factor kVA	(Avg kVA)/(Max kVA)		0.350	

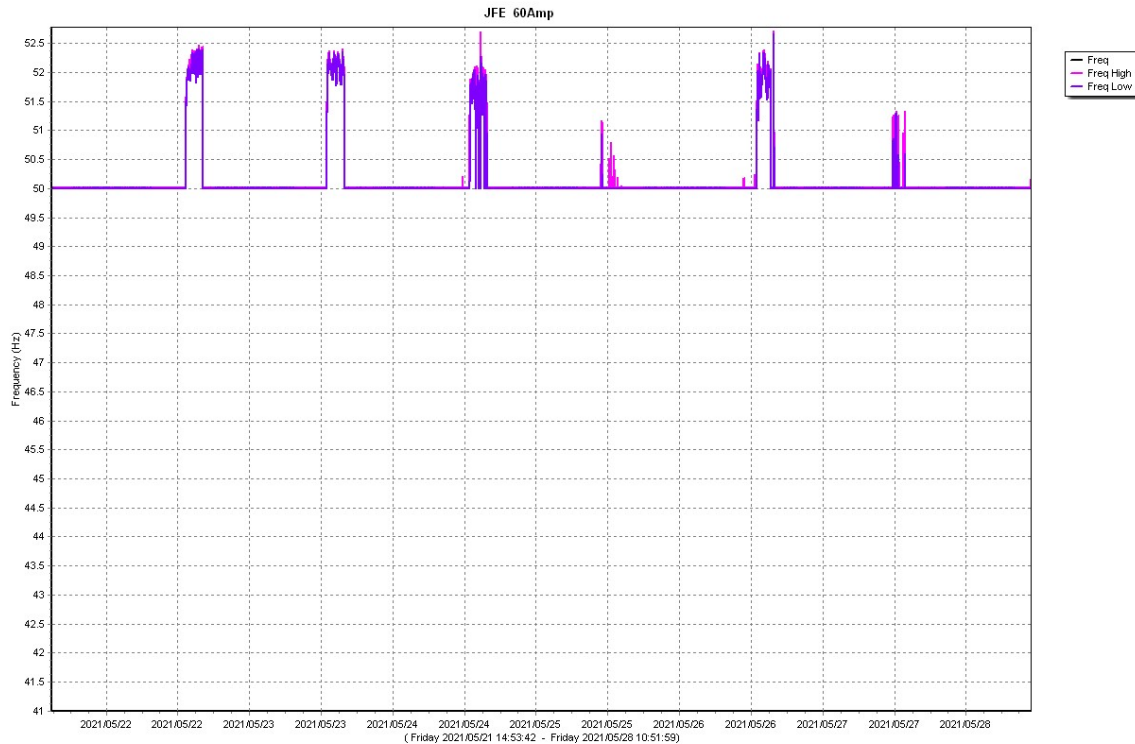
Zoomed Graphs



Graph of Current for time of Maximum Current demand



Graph of Summed kW, kVA and kVAR for time of Maximum demand



Graph showing the frequency for complete recording period

Voltage Dips

A total of 848 Dips were recorded
 All these dips are very short in duration.
 Typically, 60 milliseconds or less.
 They are also about 10% of nominal

Voltage Swells

A total of 6 swells were recorded
 All these swells are also very short in duration.
 Typically, between 10 and 60 Milliseconds
 The highest swell was 258 Volt

I hope that this information is sufficient for your application.
 If you need any additional information please feel free to contact me at any time

Regards

Willem Loubser

For Advanced Monitoring solutions
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