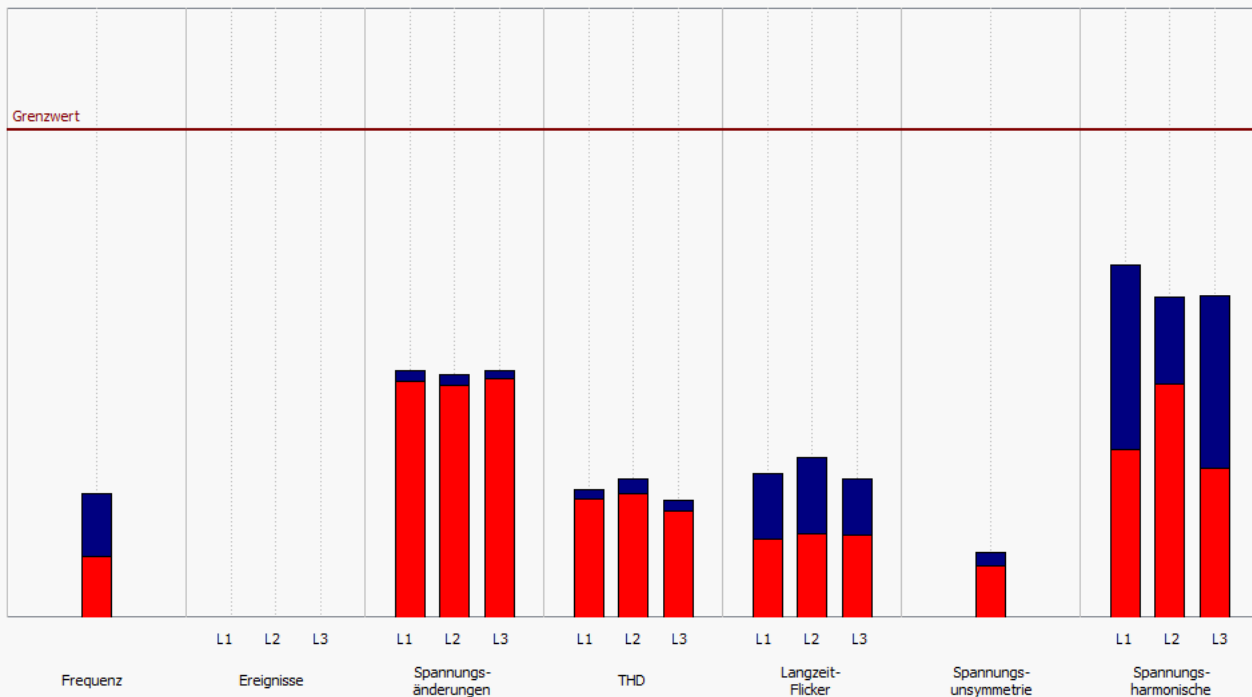


Auswertung nach EN50160/IEC61000-2-2

23.12.2014

Firma Abteilung	ZZZZZZ Forum EMPTY	EMPTY EMPTY
Kunde:		Telefonnummer:
Adresse:		Grund:
Kontakt:		SW-Version: 1.8.16.1
Spannungssystem:	4 Leiter-Netz	Seriennummer Gerät: 1322-103
Nennspannung L-L / L-N:	398.37 V / 230.00 V	Messintervall: 600 s
Frequenz:	50 Hz	Rundsteuerfrequenz: 492 Hz
Messung Beginn:	09.09.2014 14:20:00	Messung Ende: 17.09.2014 13:40:00
Messdauer:	7d 23h 20m 0s	Anzahl Messintervalle: 1149
Firmware:	1.156	DSP-Version: 1.257

Übersicht



Auswertung nach EN50160/IEC61000-2-2

23.12.2014

Firma Abteilung	ZZZZZZ Forum EMPTY		EMPTY EMPTY
Kunde:		Telefonnummer:	
Adresse:		Grund:	
Kontakt:		SW-Version:	1.8.16.1
Spannungssystem:	4 Leiter-Netz	Seriennummer Gerät:	1322-103
Nennspannung L-L / L-N:	398.37 V / 230.00 V	Messintervall:	600 s
Frequenz:	50 Hz	Rundsteuerfrequenz:	492 Hz
Messung Beginn:	09.09.2014 14:20:00	Messung Ende:	17.09.2014 13:40:00
Messdauer:	7d 23h 20m 0s	Anzahl Messintervalle:	1149
Firmware:	1.156	DSP-Version:	1.257

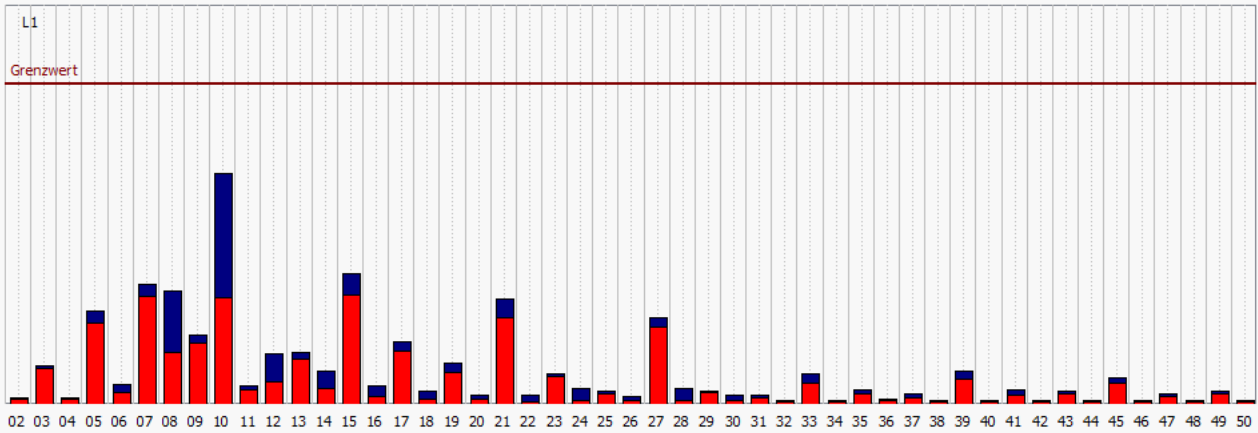
Norm Details							
	Maximalwert	95.00%	5.00%	Minimalwert	Grenzwert Max	Grenzwert Min	Anzahl Intervalle
Frequenz:	50.09 Hz	50.06 Hz	49.94 Hz	49.87 Hz	50.50 Hz	49.50 Hz	68881
	Maximalwert	95.00%	5.00%	Minimalwert	Grenzwert Max	Grenzwert Min	Anzahl Intervalle
Spannungsänderungen L1:	241.64 V	241.15 V	238.10 V	237.37 V	253.00 V	207.00 V	1149
Spannungsänderungen L2:	241.45 V	240.96 V	238.01 V	237.19 V	253.00 V	207.00 V	1149
Spannungsänderungen L3:	241.64 V	241.26 V	238.41 V	237.67 V	253.00 V	207.00 V	1149
	Maximalwert	95.00%			Grenzwert Max		Anzahl Intervalle
Spannungsunsymmetrie:	0.27	0.22			2.00		1149
Flicker L1:	0.30	0.16			1.00		94
Flicker L2:	0.33	0.17			1.00		94
Flicker L3:	0.29	0.17			1.00		94

Spannungssystem NS				
Spannungstoleranzband erfüllt				
Messwerte LN	Grenzwert 95.00% (+10%;-10%)		Grenzwert 100.00% (+10%;-15%)	
	In Toleranz	Außer Toleranz	In Toleranz	Außer Toleranz
Spannungsänderungen L1:	100.00%	0.00%	100.00%	0.00%
Spannungsänderungen L2:	100.00%	0.00%	100.00%	0.00%
Spannungsänderungen L3:	100.00%	0.00%	100.00%	0.00%

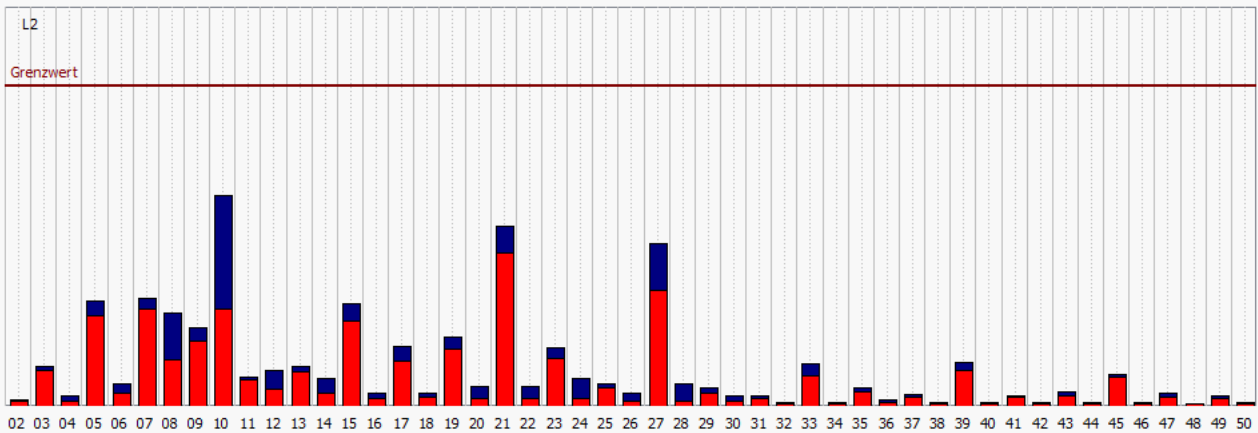
Mittelwert TanPhi

L1	0.5033	L2	-1.7753	L3	-0.8899	Summe	-0.3217
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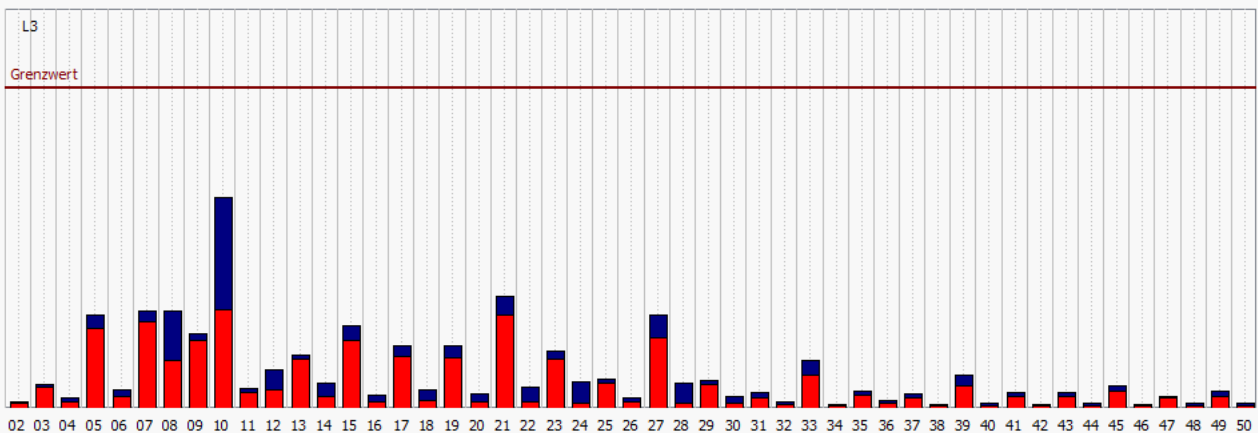
L1 - Harmonische



L2 - Harmonische



L3 - Harmonische



Auswertung nach EN50160/IEC61000-2-2

23.12.2014

Harmonische

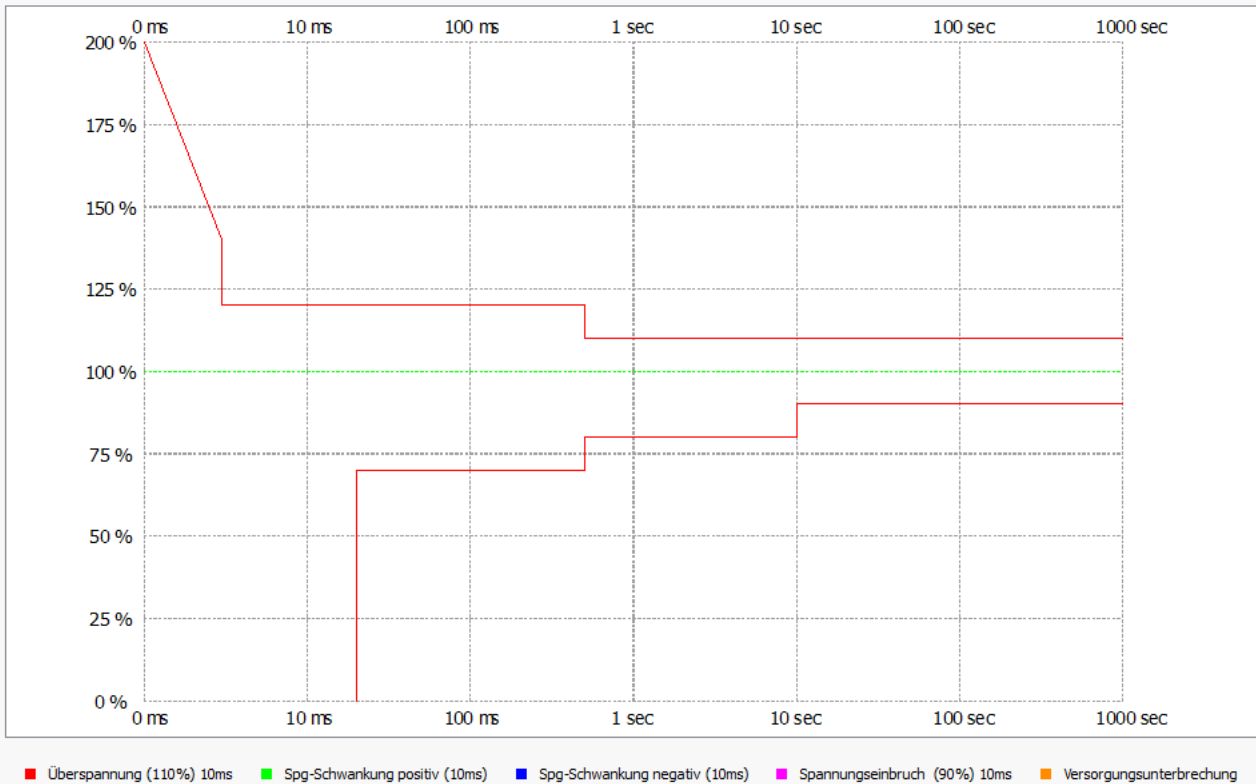
	Grenzwert	L1 - 95.00%	L1 - 100.00%	L2 - 95.00%	L2 - 100.00%	L3 - 95.00%	L3 - 100.00%
THD	8.0000 [%]	1.9619 [%]	2.1081 [%]	2.0352 [%]	2.2736 [%]	1.7503 [%]	1.9397 [%]
02	2.0000 [%]	0.0366 [%]	0.0392 [%]	0.0360 [%]	0.0428 [%]	0.0344 [%]	0.0390 [%]
03	5.0000 [%]	0.5704 [%]	0.6051 [%]	0.5703 [%]	0.6246 [%]	0.3342 [%]	0.3756 [%]
04	1.0000 [%]	0.0155 [%]	0.0224 [%]	0.0157 [%]	0.0342 [%]	0.0214 [%]	0.0334 [%]
05	6.0000 [%]	1.5279 [%]	1.7683 [%]	1.7158 [%]	1.9754 [%]	1.5009 [%]	1.7488 [%]
06	0.5000 [%]	0.0190 [%]	0.0304 [%]	0.0207 [%]	0.0359 [%]	0.0198 [%]	0.0283 [%]
07	5.0000 [%]	1.6914 [%]	1.8708 [%]	1.5181 [%]	1.6943 [%]	1.3507 [%]	1.5360 [%]
08	0.5000 [%]	0.0817 [%]	0.1767 [%]	0.0740 [%]	0.1455 [%]	0.0755 [%]	0.1534 [%]
09	1.5000 [%]	0.2869 [%]	0.3274 [%]	0.3052 [%]	0.3672 [%]	0.3209 [%]	0.3527 [%]
10	0.5000 [%]	0.1681 [%]	0.3618 [%]	0.1536 [%]	0.3293 [%]	0.1541 [%]	0.3308 [%]
11	3.5000 [%]	0.1632 [%]	0.2045 [%]	0.2869 [%]	0.3288 [%]	0.1728 [%]	0.2211 [%]
12	0.5000 [%]	0.0365 [%]	0.0802 [%]	0.0266 [%]	0.0567 [%]	0.0286 [%]	0.0611 [%]
13	3.0000 [%]	0.4321 [%]	0.4917 [%]	0.3279 [%]	0.3704 [%]	0.4648 [%]	0.4972 [%]
14	0.5000 [%]	0.0248 [%]	0.0520 [%]	0.0199 [%]	0.0434 [%]	0.0197 [%]	0.0407 [%]
15	0.5000 [%]	0.1721 [%]	0.2043 [%]	0.1344 [%]	0.1619 [%]	0.1059 [%]	0.1303 [%]
16	0.5000 [%]	0.0132 [%]	0.0303 [%]	0.0131 [%]	0.0205 [%]	0.0111 [%]	0.0206 [%]
17	2.0000 [%]	0.3328 [%]	0.3949 [%]	0.2865 [%]	0.3737 [%]	0.3294 [%]	0.3909 [%]
18	0.5000 [%]	0.0087 [%]	0.0203 [%]	0.0138 [%]	0.0208 [%]	0.0125 [%]	0.0296 [%]
19	1.5000 [%]	0.1483 [%]	0.1943 [%]	0.2671 [%]	0.3261 [%]	0.2370 [%]	0.2954 [%]
20	0.5000 [%]	0.0074 [%]	0.0150 [%]	0.0135 [%]	0.0311 [%]	0.0115 [%]	0.0226 [%]
21	0.5000 [%]	0.1355 [%]	0.1659 [%]	0.2395 [%]	0.2829 [%]	0.1458 [%]	0.1766 [%]
22	0.5000 [%]	0.0051 [%]	0.0154 [%]	0.0119 [%]	0.0312 [%]	0.0097 [%]	0.0325 [%]
23	1.5000 [%]	0.1313 [%]	0.1462 [%]	0.2263 [%]	0.2743 [%]	0.2349 [%]	0.2726 [%]
24	0.5000 [%]	0.0061 [%]	0.0253 [%]	0.0117 [%]	0.0441 [%]	0.0090 [%]	0.0424 [%]
25	1.5000 [%]	0.0488 [%]	0.0606 [%]	0.0876 [%]	0.1075 [%]	0.1183 [%]	0.1377 [%]
26	0.3500 [%]	0.0042 [%]	0.0093 [%]	0.0062 [%]	0.0146 [%]	0.0068 [%]	0.0116 [%]
27	0.2000 [%]	0.0489 [%]	0.0547 [%]	0.0726 [%]	0.1020 [%]	0.0441 [%]	0.0581 [%]
28	0.3400 [%]	0.0039 [%]	0.0170 [%]	0.0052 [%]	0.0237 [%]	0.0052 [%]	0.0273 [%]
29	1.0600 [%]	0.0398 [%]	0.0460 [%]	0.0445 [%]	0.0620 [%]	0.0813 [%]	0.0944 [%]
30	0.3300 [%]	0.0042 [%]	0.0091 [%]	0.0056 [%]	0.0106 [%]	0.0056 [%]	0.0127 [%]
31	0.9700 [%]	0.0214 [%]	0.0297 [%]	0.0235 [%]	0.0339 [%]	0.0323 [%]	0.0489 [%]
32	0.3300 [%]	0.0032 [%]	0.0040 [%]	0.0032 [%]	0.0048 [%]	0.0036 [%]	0.0064 [%]
33	0.2000 [%]	0.0136 [%]	0.0188 [%]	0.0192 [%]	0.0269 [%]	0.0208 [%]	0.0304 [%]
34	0.3200 [%]	0.0031 [%]	0.0041 [%]	0.0031 [%]	0.0041 [%]	0.0032 [%]	0.0043 [%]
35	0.8300 [%]	0.0294 [%]	0.0375 [%]	0.0367 [%]	0.0476 [%]	0.0341 [%]	0.0458 [%]
36	0.3200 [%]	0.0039 [%]	0.0056 [%]	0.0046 [%]	0.0072 [%]	0.0049 [%]	0.0077 [%]
37	0.7700 [%]	0.0174 [%]	0.0244 [%]	0.0241 [%]	0.0304 [%]	0.0242 [%]	0.0342 [%]
38	0.3200 [%]	0.0031 [%]	0.0036 [%]	0.0029 [%]	0.0039 [%]	0.0031 [%]	0.0039 [%]
39	0.2000 [%]	0.0161 [%]	0.0211 [%]	0.0224 [%]	0.0274 [%]	0.0142 [%]	0.0207 [%]
40	0.3100 [%]	0.0032 [%]	0.0039 [%]	0.0030 [%]	0.0040 [%]	0.0032 [%]	0.0046 [%]
41	0.6700 [%]	0.0203 [%]	0.0302 [%]	0.0187 [%]	0.0229 [%]	0.0252 [%]	0.0327 [%]
42	0.3100 [%]	0.0031 [%]	0.0042 [%]	0.0028 [%]	0.0036 [%]	0.0030 [%]	0.0038 [%]
43	0.6300 [%]	0.0199 [%]	0.0258 [%]	0.0198 [%]	0.0303 [%]	0.0236 [%]	0.0317 [%]
44	0.3100 [%]	0.0030 [%]	0.0035 [%]	0.0027 [%]	0.0040 [%]	0.0029 [%]	0.0053 [%]
45	0.2000 [%]	0.0137 [%]	0.0166 [%]	0.0183 [%]	0.0200 [%]	0.0111 [%]	0.0140 [%]
46	0.3000 [%]	0.0030 [%]	0.0034 [%]	0.0028 [%]	0.0038 [%]	0.0029 [%]	0.0032 [%]
47	0.5500 [%]	0.0147 [%]	0.0187 [%]	0.0163 [%]	0.0225 [%]	0.0174 [%]	0.0210 [%]
48	0.3000 [%]	0.0031 [%]	0.0035 [%]	0.0028 [%]	0.0030 [%]	0.0030 [%]	0.0049 [%]
49	0.5200 [%]	0.0172 [%]	0.0212 [%]	0.0134 [%]	0.0166 [%]	0.0201 [%]	0.0280 [%]
50	0.3000 [%]	0.0031 [%]	0.0041 [%]	0.0028 [%]	0.0035 [%]	0.0029 [%]	0.0052 [%]

PQ-Ereignisse

Frequenzabweichung:	0 Rundsteuersignal (3sec):	0
Überspannung (110%) 10ms:	0 Langsame Spannungsabweichung:	0
Spg-Schwankung positiv (10ms):	0 Überschreitung Langzeitflicker:	0
Spg-Schwankung negativ (10ms):	0 Überschreitung Unsymmetrie:	0
Spannungseinbruch (90%) 10ms:	0 Überschreitung THD:	0
Versorgungsunterbrechung:	0 Überschreitung Harmonische:	0

ITIC Auswertung

ITIC Auswertung [09.09.2014 14:20:00 - 17.09.2014 13:40:00]



Ereignis-Matrix

Restspannung in [%]	Dauer t [ms]				
	10 ≤ t < 200	200 ≤ t < 500	500 ≤ t < 1000	1000 ≤ t < 5000	5000 ≤ t ≤ 60000
90 > u ≥ 80	0	0	0	0	0
80 > u ≥ 70	0	0	0	0	0
70 > u ≥ 40	0	0	0	0	0
40 > u ≥ 5	0	0	0	0	0
5 > u	0	0	0	0	0

Überspannung u [%]	Dauer t [ms]		
	10 ≤ t < 500	500 ≤ t < 5000	5000 ≤ t ≤ 60000
u ≥ 120	0	0	0
120 > u ≥ 110	0	0	0