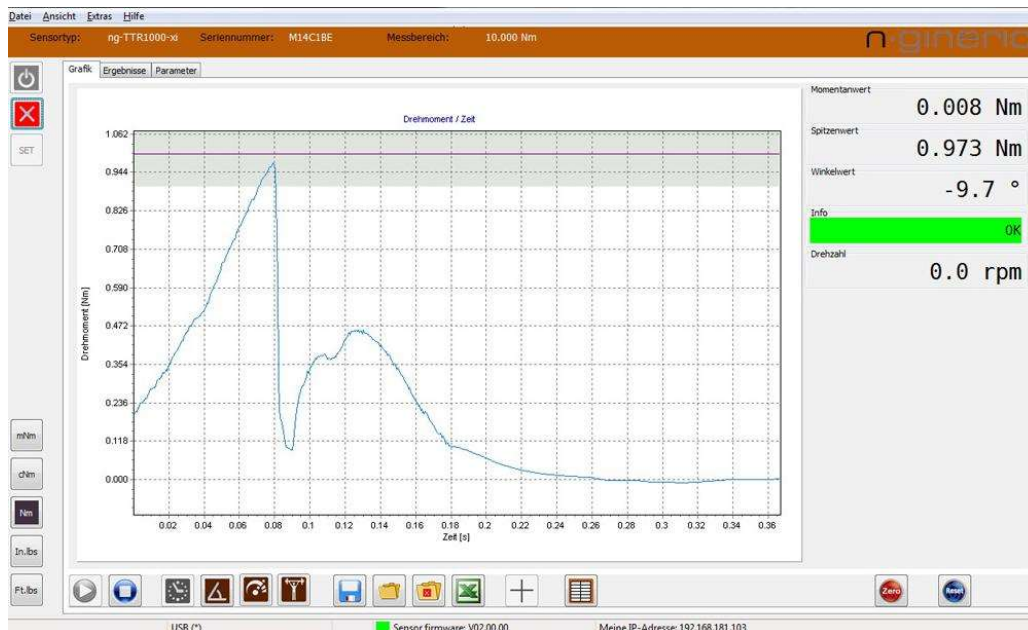


2 Software

2.1 Sensor System Software n-quirer TT V3 basic

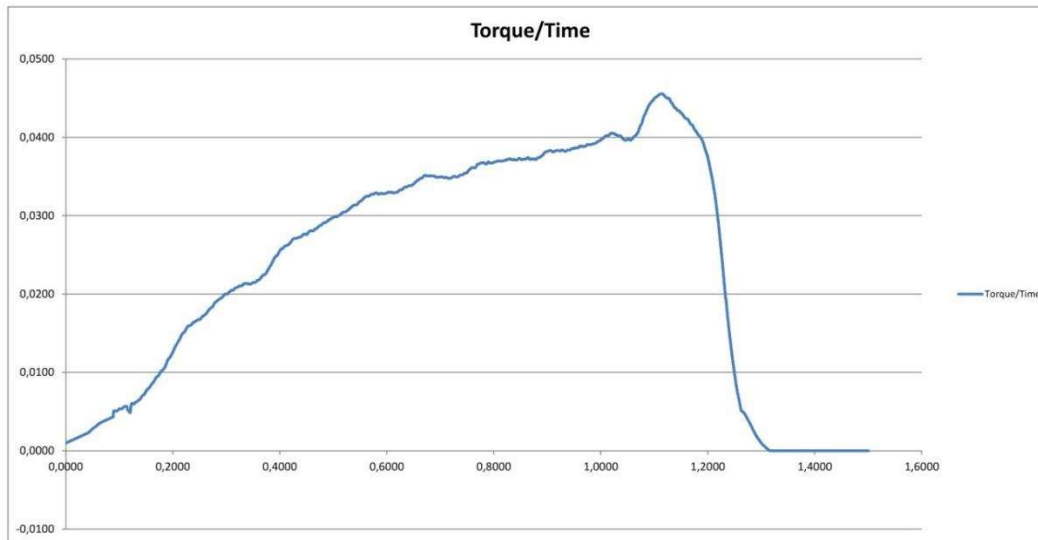
For tablet PCs, laptops, notebooks, PC running Windows, in combination with all intelligent sensors from n-gineric providing:

- Graph recordings of
 - Torque vs. time
 - Torque vs. angle
 - Force vs. time
 - Force vs. displacement
- Automatic sensor identification
- Graph reading with up to 2,000 measurements per second
- Display resolution 5 digits plus decimal point
- Supports different physical units
- 2 control windows with internal or external triggering
- 2nd trigger value for angle control or displacement control
- Adjustable low pass filter (10 Hz to 500 Hz)
- Supports the loading of a reference graph for comparison
- Direct export of the graph reading into Excel
- Direct export of measurements results listing into Excel with SPC document template
- Direct sensor connectivity via USB or Ethernet



n-quirer TT V3 basic Graph

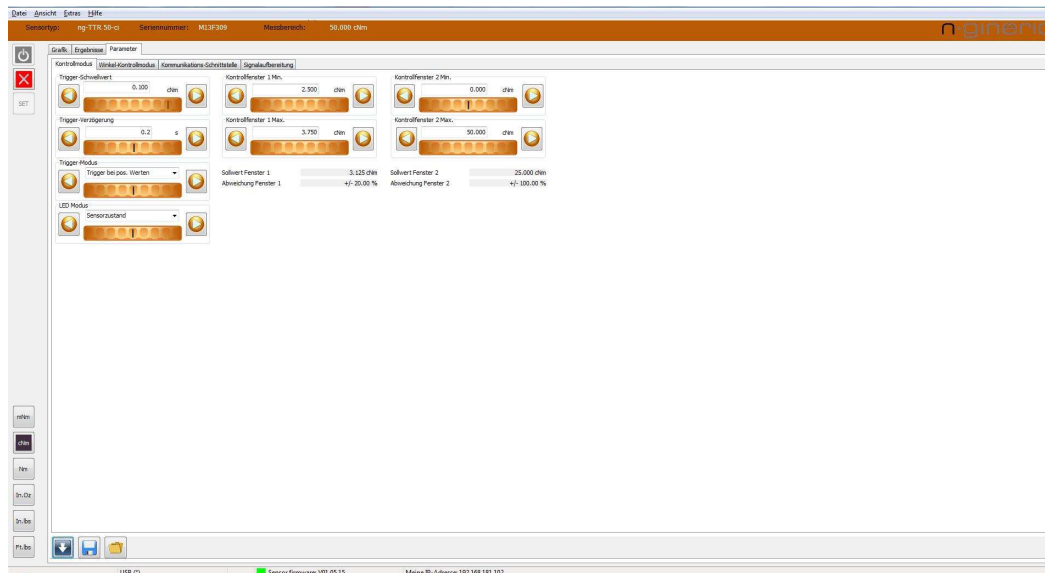
Date/Time:	26.05.13 17:43:20
Tool Serial Number:	M13F309
Y-Axis Unit:	cNm
X-Axis Unit:	s



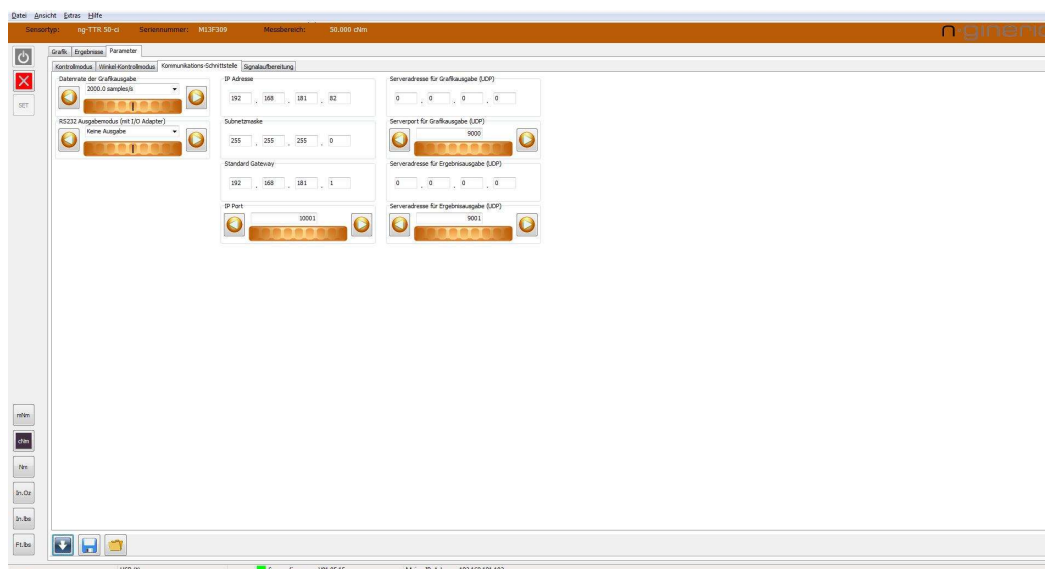
n-quirer TT V3 graph exported to Excel

Date: 26.05.13 17:43:20														
Tool: M13F309														
Sensor: M13F309														
Unit: cNm														
Graph: Torque/Time														
Table														
No.	Date	Time	Max.	Min.	Mean	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit	Unit
1	2013-05-26	17:34:34	3.993	-0.001	1.746	cNm	12.50	+	0.00000	16.0	0.0	3.7	0.060	0.000
2	2013-05-26	17:34:35	1.442	0.000	1.448	cNm	3.20	+	0.00000	-9.6	0.0	0.6	0.030	0.000
3	2013-05-26	17:34:36	3.742	-0.001	1.550	cNm	3.60	+	0.00000	-10.0	0.0	0.6	0.035	0.000
4	2013-05-26	17:34:37	2.998	0.000	1.245	cNm	-0.30	+	0.00000	-6.3	0.0	-5.4	0.011	0.000
5	2013-05-26	17:34:38	3.112	0.000	1.296	cNm	0.60	+	0.00000	-7.6	0.0	0.0	0.010	0.000
6	2013-05-26	17:34:40	3.004	0.000	1.229	cNm	0.80	+	0.00000	-7.3	0.0	0.0	0.011	0.000
7	2013-05-26	17:34:41	2.956	-0.001	1.368	cNm	0.00	+	0.00000	-8.6	0.0	-0.1	0.008	0.000
8	2013-05-26	17:34:42	3.353	-0.001	1.604	cNm	2.80	+	0.00000	-9.0	0.0	0.5	0.017	0.000
9	2013-05-26	17:34:44	3.378	0.000	1.650	cNm	3.30	+	0.00000	-9.8	0.0	0.2	0.013	0.000
10	2013-05-26	17:34:45	3.323	-0.001	1.431	cNm	0.00	+	0.00000	-8.0	0.0	-0.1	0.013	0.000

n-quirer TT V3 measurement results



n-quirer TT V3 control mode tab sheet



n-quirer TT V3 communication interface tab sheet

Requirements to the PC system:

- Operating system Windows 10 Pro
- Screen resolution at least 1280 x 680 pixels
- Microsoft Excel 2007 or later or compatible Office package

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n-quirer TT V3 advanced measurement results

n-gineric Statistical Report

Date/Time:	28.08.12 18:01:49	Tool Serial Number:	M13F4E0
Target Value [Nm]:	0.5000	Tolerance (+/-) [%]:	12.00%

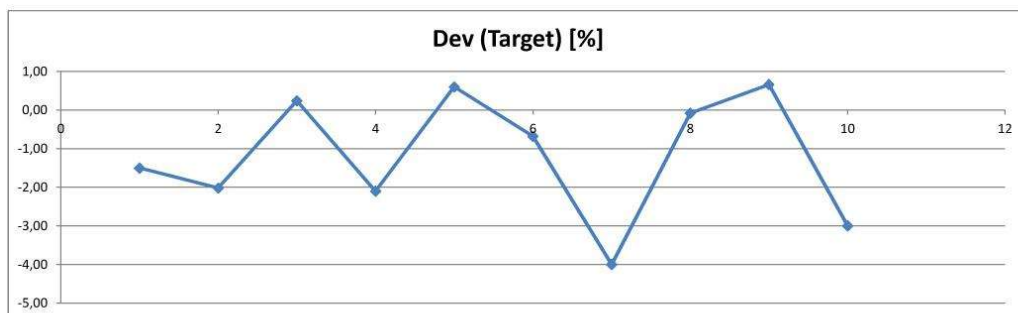
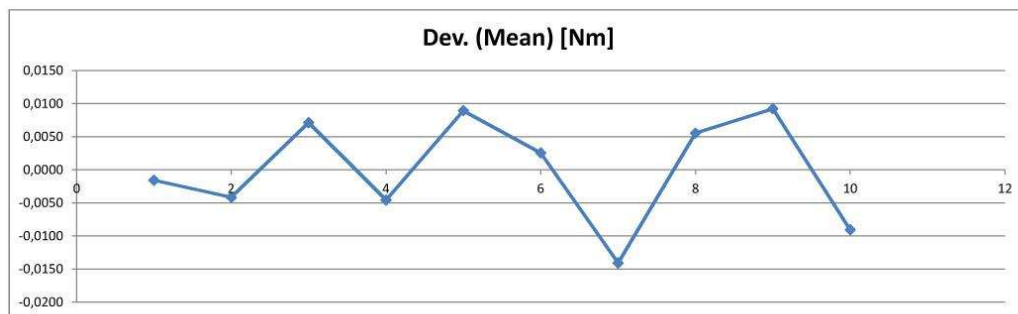
Count	Date	Time	Max.	Unit	Dev (Target) [%]	Dev. (Mean) [Nm]	Sqr. Deviation
1	2012-08-28	18:00:47	0.4925	Nm	-1.50	-0.0016	0.0000
2	2012-08-28	18:00:52	0.4899	Nm	-2.02	-0.0042	0.0000
3	2012-08-28	18:00:55	0.5012	Nm	0.24	0.0071	0.0001
4	2012-08-28	18:00:58	0.4895	Nm	-2.10	-0.0046	0.0000
5	2012-08-28	18:01:00	0.503	Nm	0.60	0.0089	0.0001
6	2012-08-28	18:01:03	0.4966	Nm	-0.68	0.0025	0.0000
7	2012-08-28	18:01:06	0.48	Nm	-4.00	-0.0141	0.0002
8	2012-08-28	18:01:11	0.4996	Nm	-0.08	0.0055	0.0000
9	2012-08-28	18:01:22	0.5033	Nm	0.66	0.0092	0.0001
10	2012-08-28	18:01:25	0.485	Nm	-3.00	-0.0091	0.0001

Lower Limit:	0.4400
Upper Limit:	0.5600
Process Mean:	0.4941
Standard Deviation:	0.0080
Cm	2.50
Cmi	2.26
Cmu	2.75
Cmk	2.26

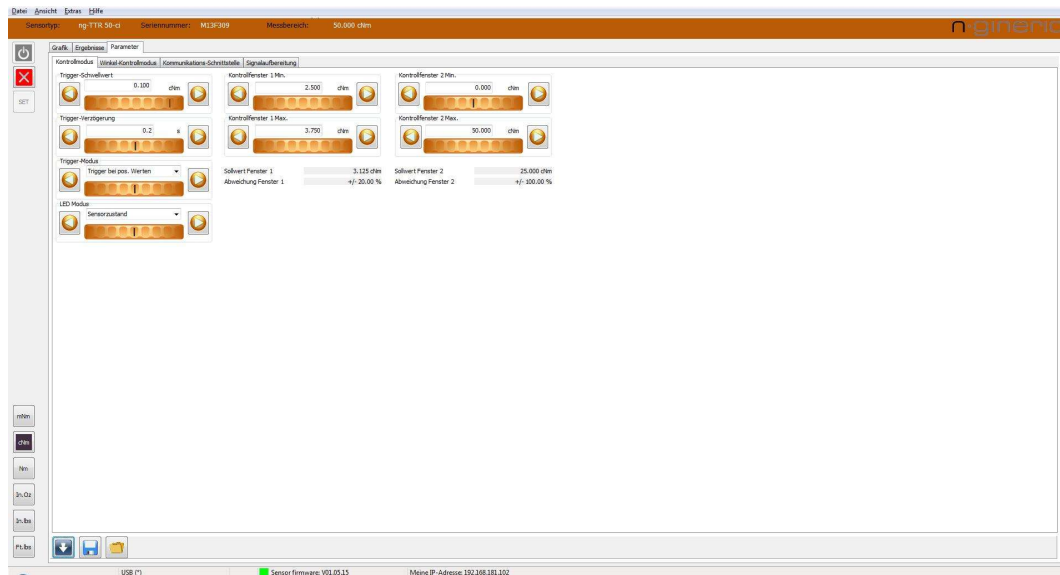
n-quirer TT V3 advanced SPC calculation in Excel

n-gineric Statistical Report

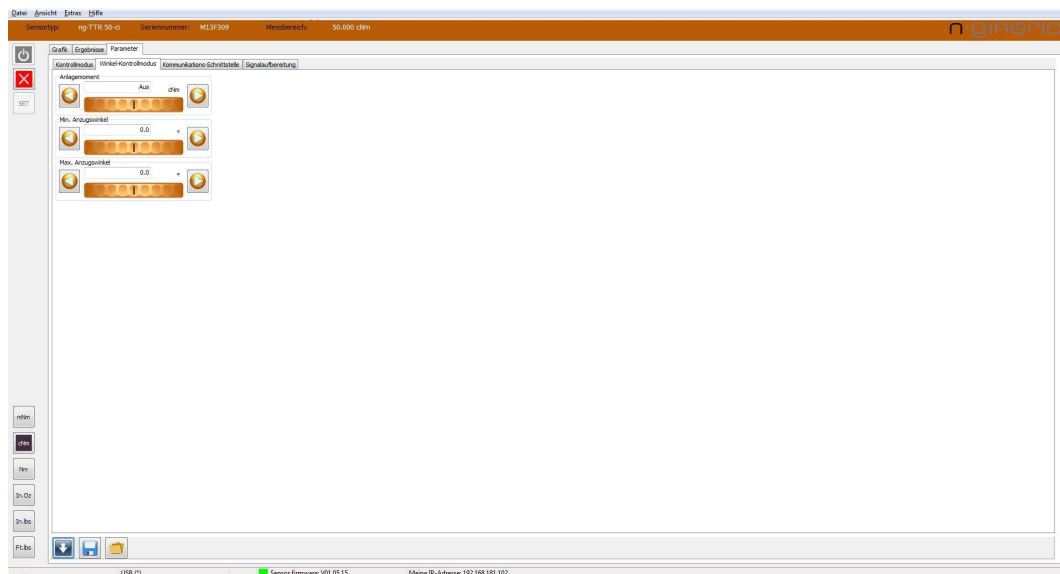
n·gineric



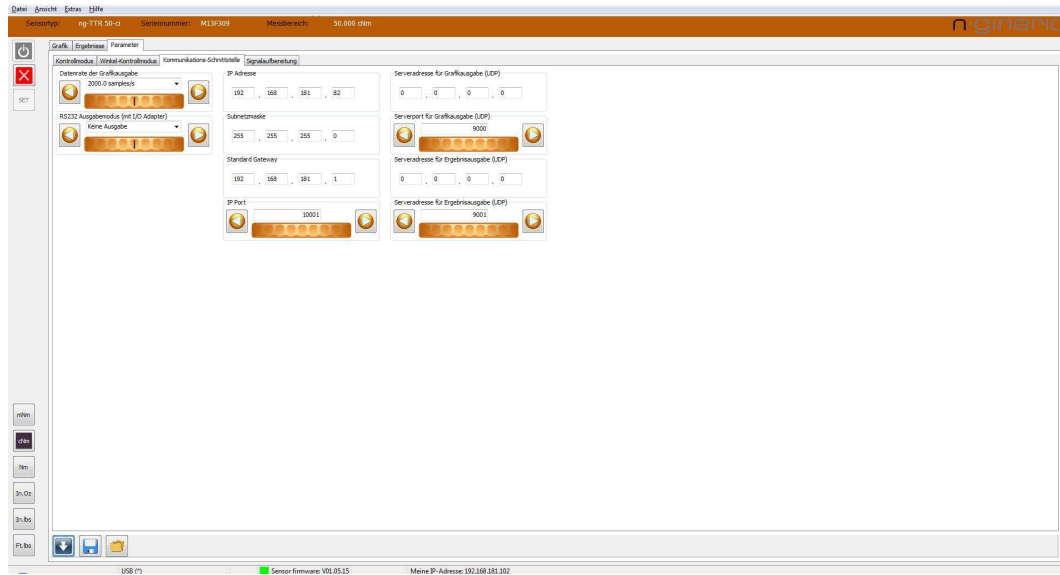
n-quirer TT V3 advanced Example of an Excel report with SPC functionality. Modifications of the template are possible according to your demands.



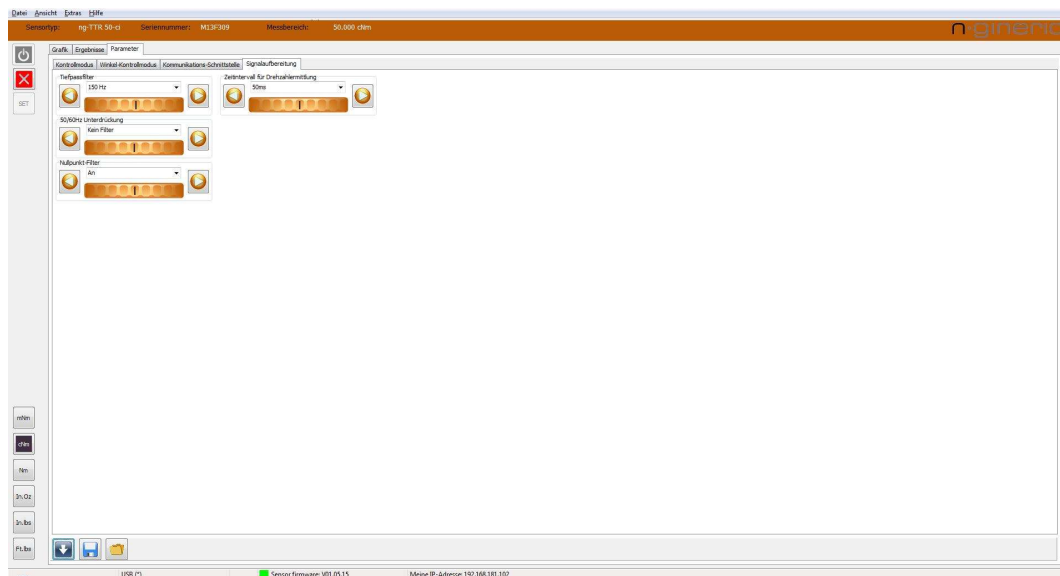
n-quirer TT V3 advanced control mode tab sheet



n-quirer TT V3 advanced angle control mode tab sheet



n-quirer TT V3 communication interface tab sheet



n-quirer TT V3 signal conditioning tab sheet

Article Number	01-01-00143-01
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