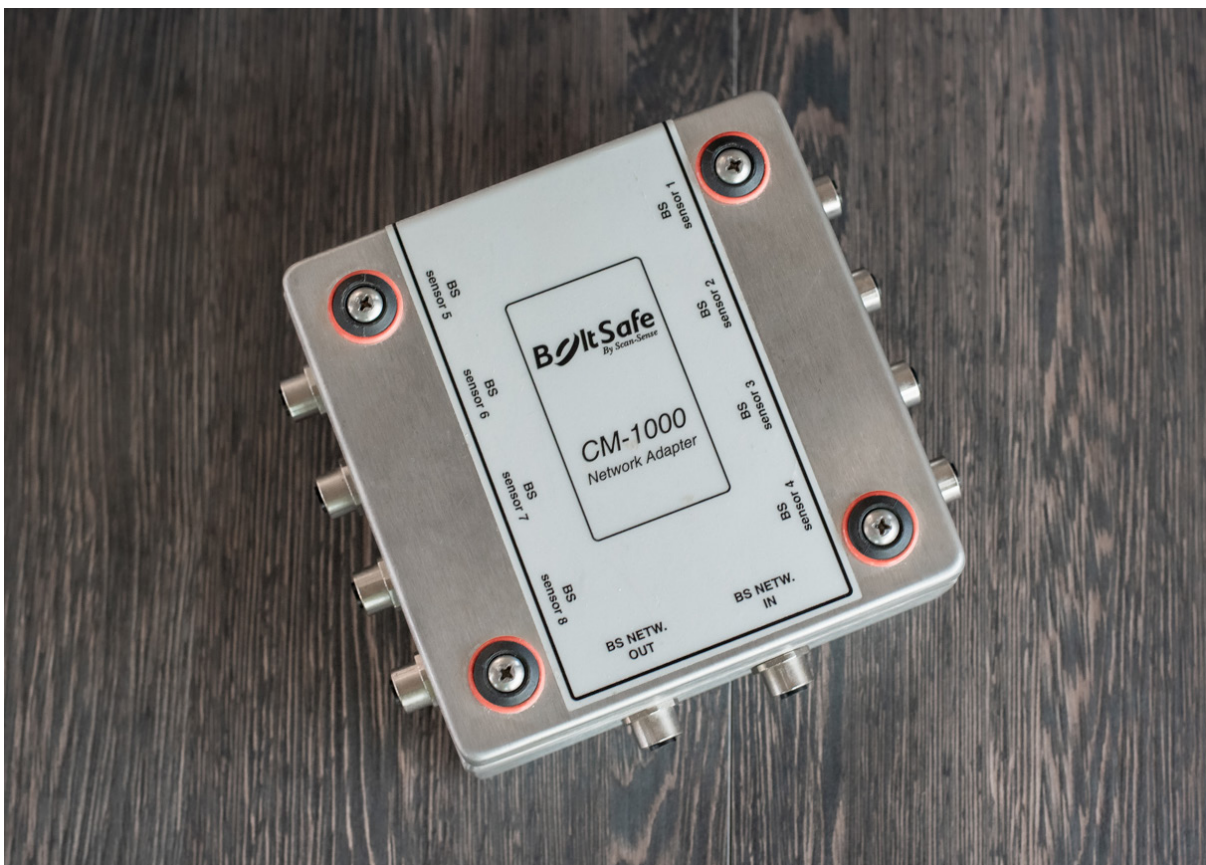


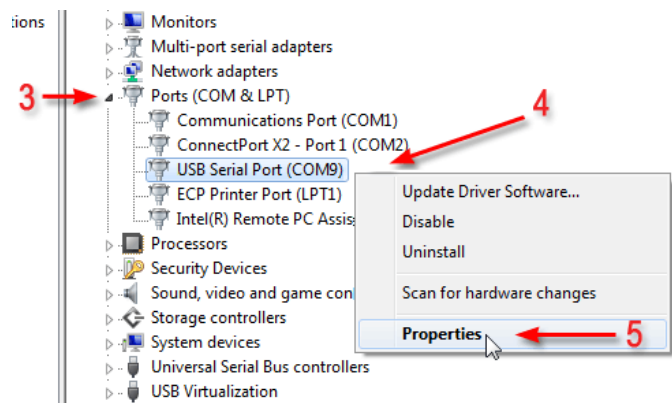
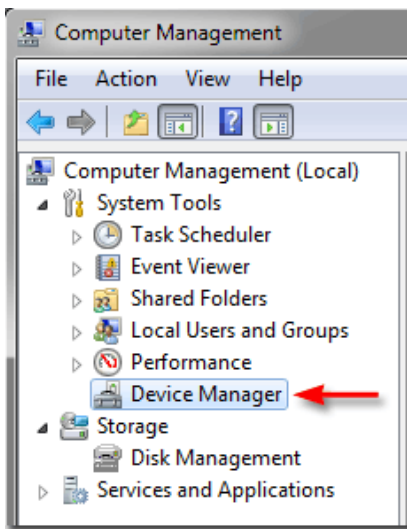
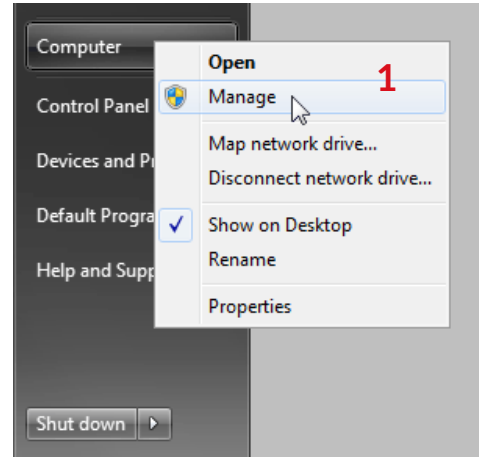
Setting up the system

1. Install the Pixsys NET-200 Drivers on the computer;
2. Install the BS2000 Software on the computer;
3. Connect the “BS NETW. IN” connector of the first CM-1000 box to the Power Data Interface (PDI box);
4. Connect the “BS NETW.IN” connector of the second, third, etc. CM-1000 box to the “BS NETW. OUT” connector of the previous CM-1000 box;
5. Make sure the last CM-1000 box in the network is an end box. An end box doesn't have a “BS NETW. OUT” connector;
6. Connect the BoltSafe CMS sensors to the CM-1000 Boxes;
7. Plug in the PDI box to the power supply;
8. Connect the PDI box to the computer via the USB cable.

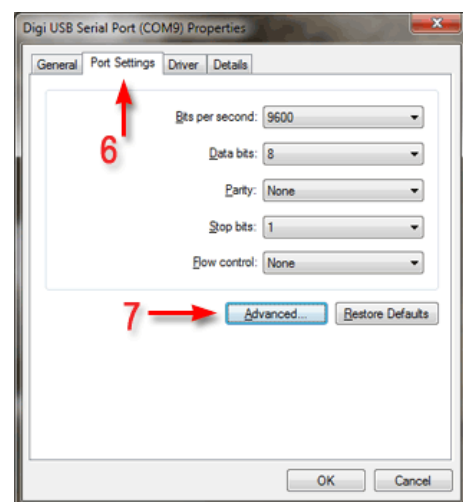


Configure the system on a Windows computer

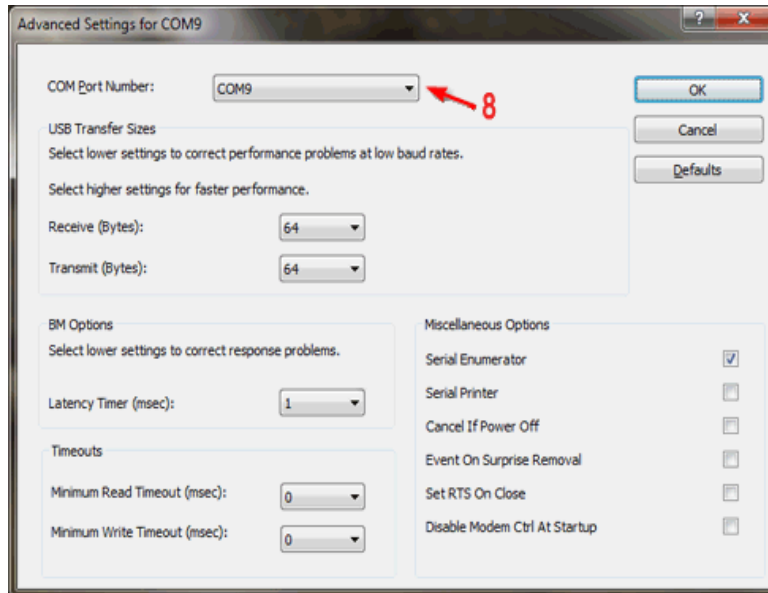
1. Go to the Windows Device Manager.
 - a) Click on the Start/Windows button.
 - b) Right-click on My Computer or Computer.
 - c) Select Manage.
2. Select Device Manager from the left-hand column.



3. Click on the Port (COM & LPT) section in the right-hand column and expand it.
4. Right-click on USB Serial Port (this can be named a number of things, make sure it is the correct one for your radio).
5. Select Properties.
6. Click on the Port Settings tab.
7. Click on Advanced.



8. Select a COM Port Number of your choice between COM1 and COM10.

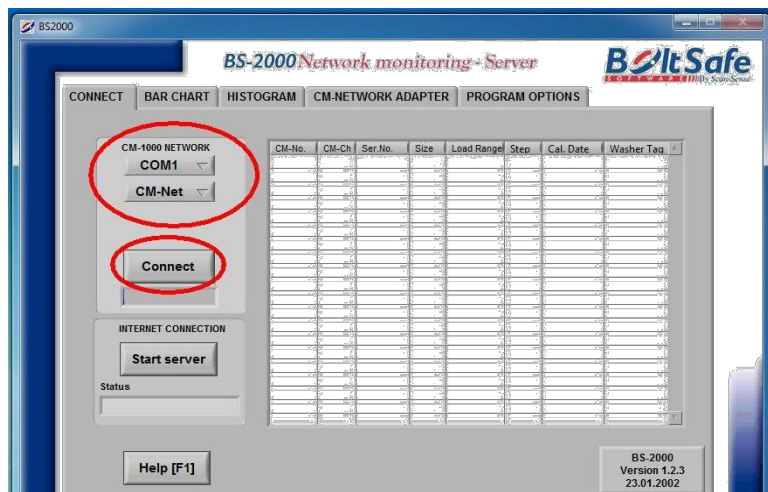


9. Click OK on both windows and close the Device Manager.

10. Start the BS2000 software.

11. Select the COM Port you have just chosen.

12. Click on Connect.

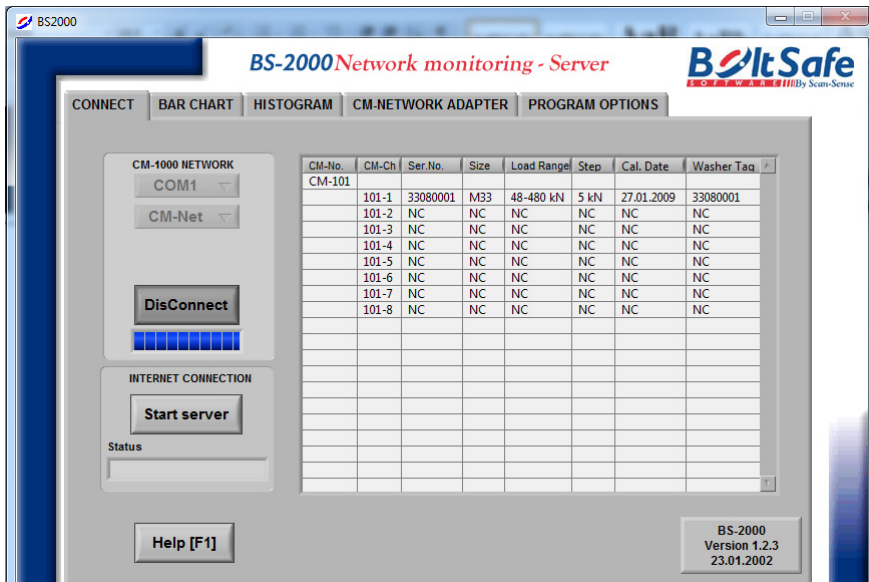


13. After step 12, one or more CM1000 boxes show up in the table.

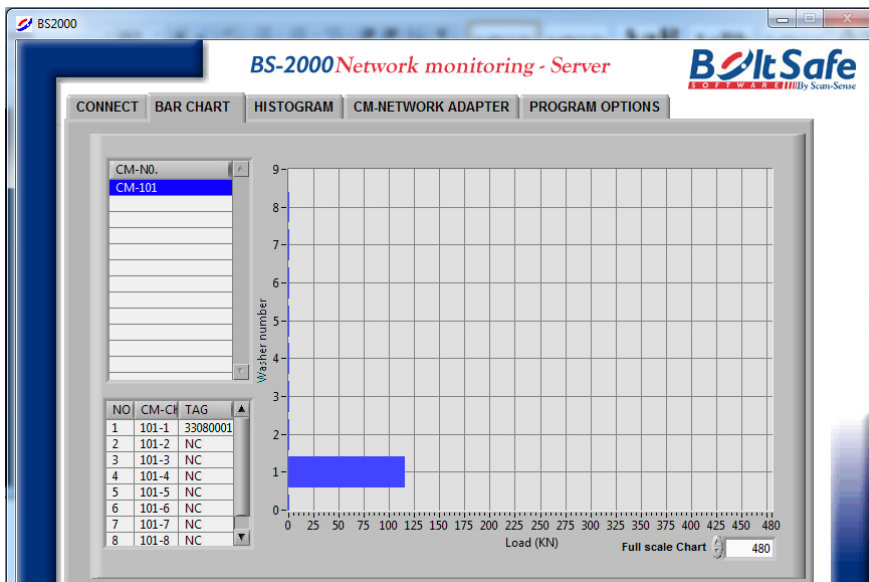


Set up the BS2000 software

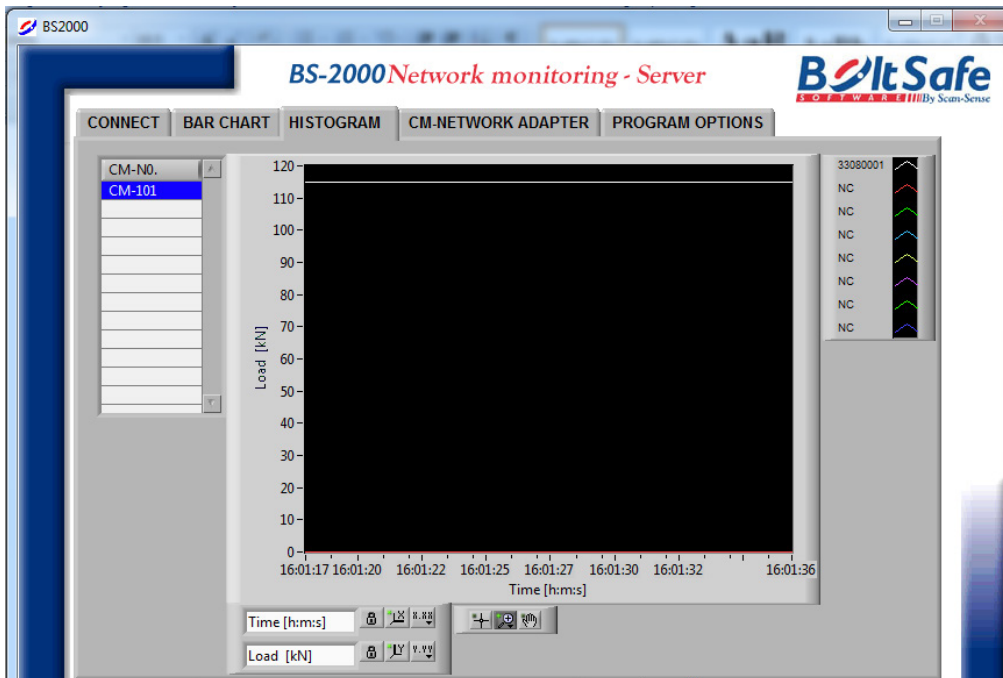
1. If you double click on one of the connected CM-1000 boxes in the table, you can see which sensors are connected and to which part of the box.



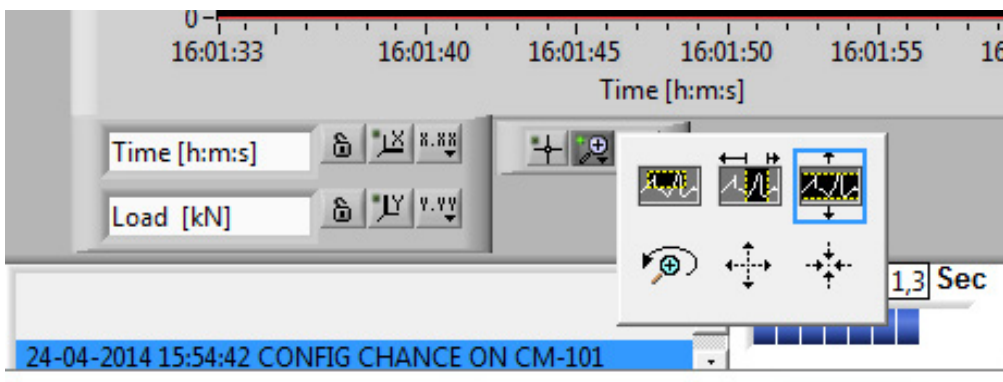
2. If you double-click on one of the connected CM-1000 boxes on the left, you can see the loads of the connected sensors in the bar chart in the middle of the screen.
3. On the bottom of the screen, you can change the scale of the bar chart.



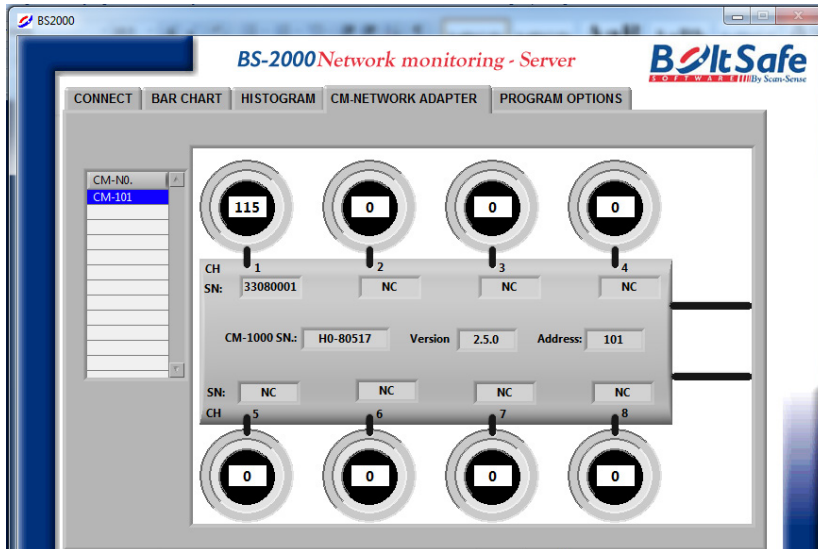
4. If you double-click on one of the connected CM-1000 boxes on the left, you can see the loads of the connected sensors in the graph in the middle of the screen.
5. On the bottom of the screen, you can change the scale of the graph.



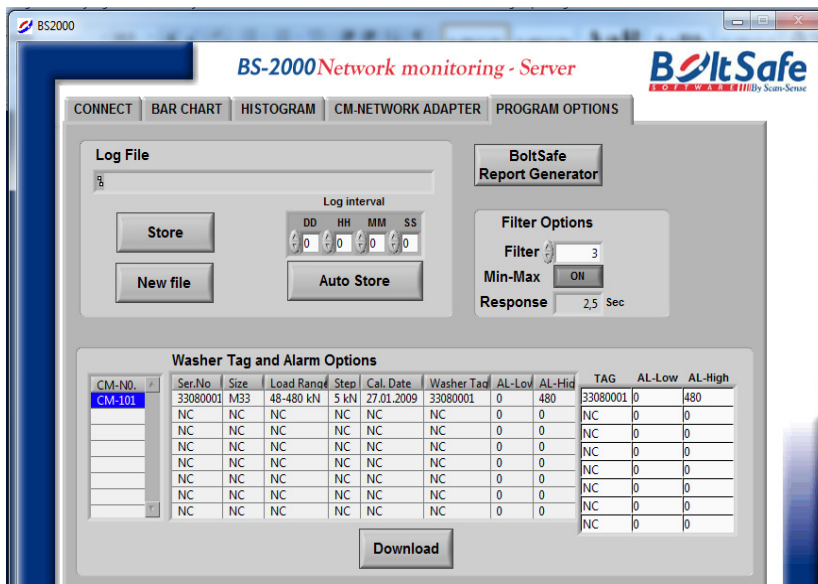
6. Unlock the axis.
7. Choose the way you prefer to zoom.



- If you double-click on one of the connected CM-1000 boxes on the left, you can see the loads of the connected sensors in a schematic.

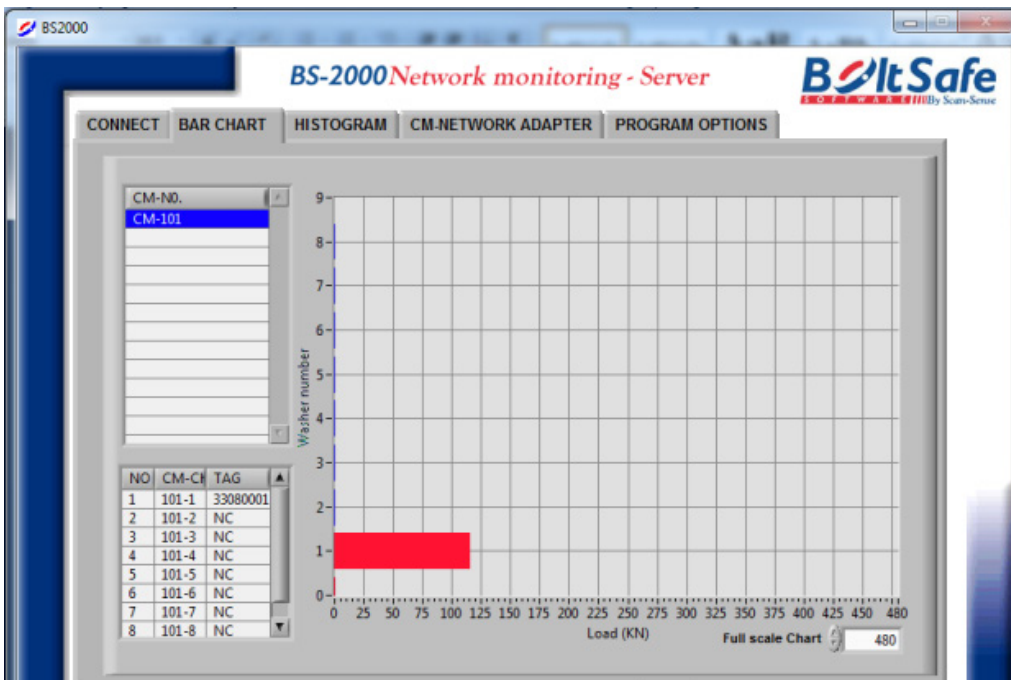


- Click on the button BoltSafe Report Generator to start another program which can be used to read data from a SM-200 Handheld Reader.
- When you double-click on one of the connected CM-1000 boxes, you can see which sensors are connected and to which part of the box and their set alarm values.



11. The TAG is initially equal to the serial number. However, when you click in one of the fields below the TAG header, you can change it into a more logical name, such as a position.
12. The Low alarm value has a default of 0. The High alarm value states the maximum load of the sensor. When you click in one of the fields below the AL-Low or AL-High headers, you can change these set alarm values. The bar chart turns red when the alarm is exceeded.

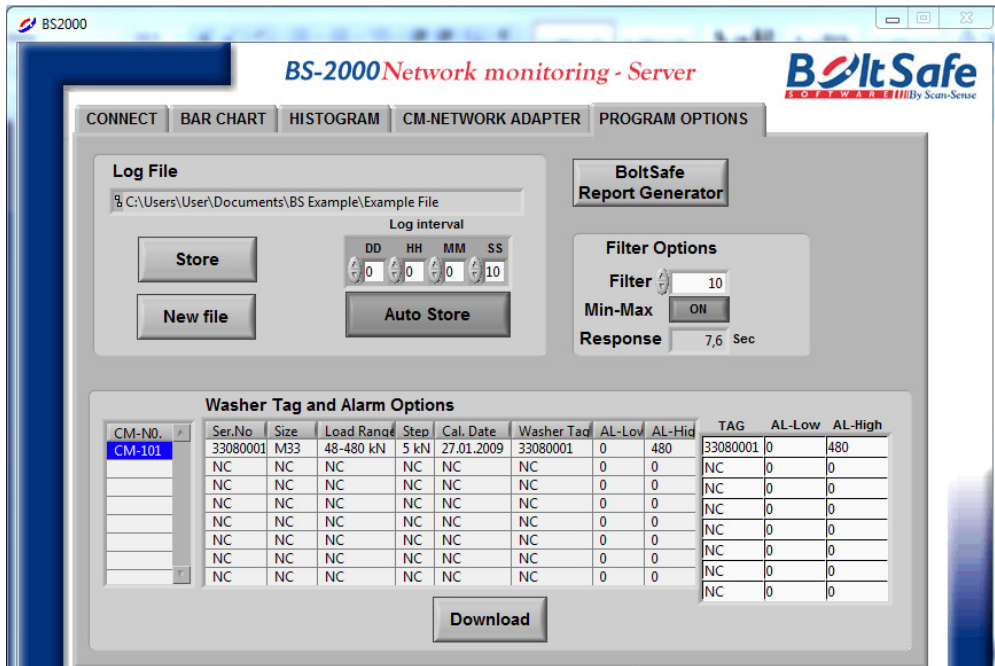
TAG	AL-Low	AL-High
33080001	0	80
NC	0	0
NC	0	0
NC	0	0
NC	0	0
NC	0	0
NC	0	0
NC	0	0



13. Click on Download to save the TAGs and alarm values in the CM-1000, otherwise all values will be set to default as soon as you close the BS2000 Software.



14. In order to get a more fluid graph on the HISTOGRAM tab, you can set the Filter Options. The number behind filter represents how many of the past measuring values must be used to calculate the new displayed value in the graph. When Min-Max is ON, the lowest and highest value of the set past measuring data is not used in the calculation.



Calculation example

Measuring values: 105 110 115 105 100 105 105 110 115 105 100 110 105
 Filter 5: 107 107 106 105 107 108 107 108 107
 Filter 5 and Min-Max 107 107 105 105 107 105 107 108 107

Filter on 5

110
115
105
100
105 +
535

535/5=107

Filter on 5, next measurement

115
105
100
105
105 +
530

530/5=106

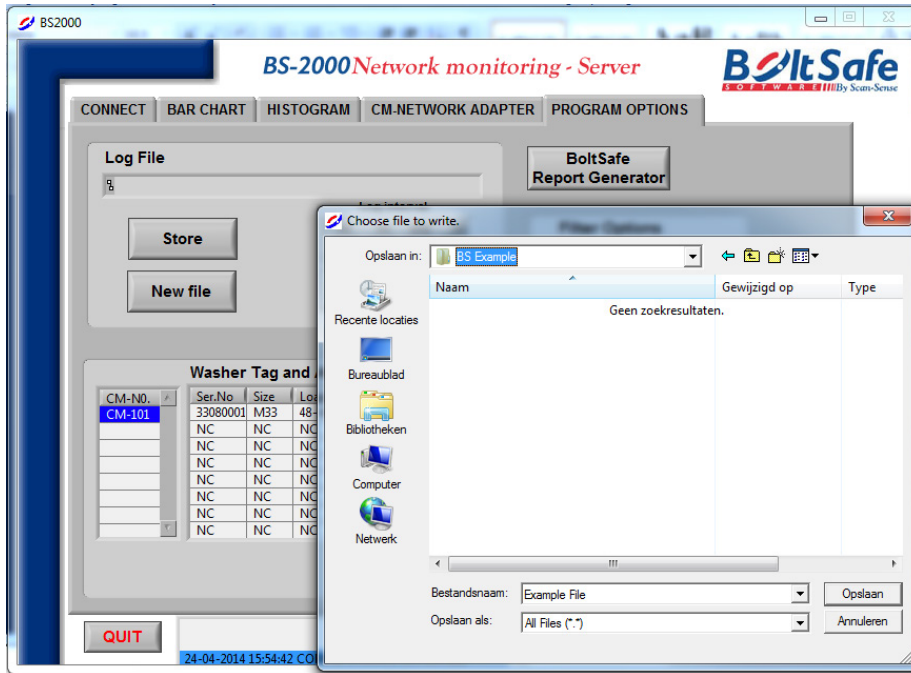
Filter on 5, with Min-Max on

~~115~~
105
~~100~~
110
105 +
320

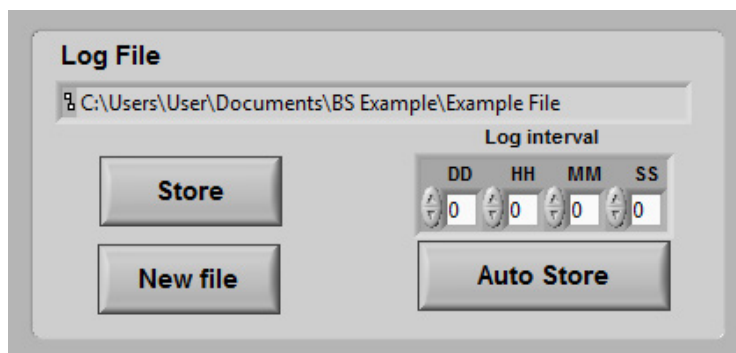
320/3 = 106,67 → 107



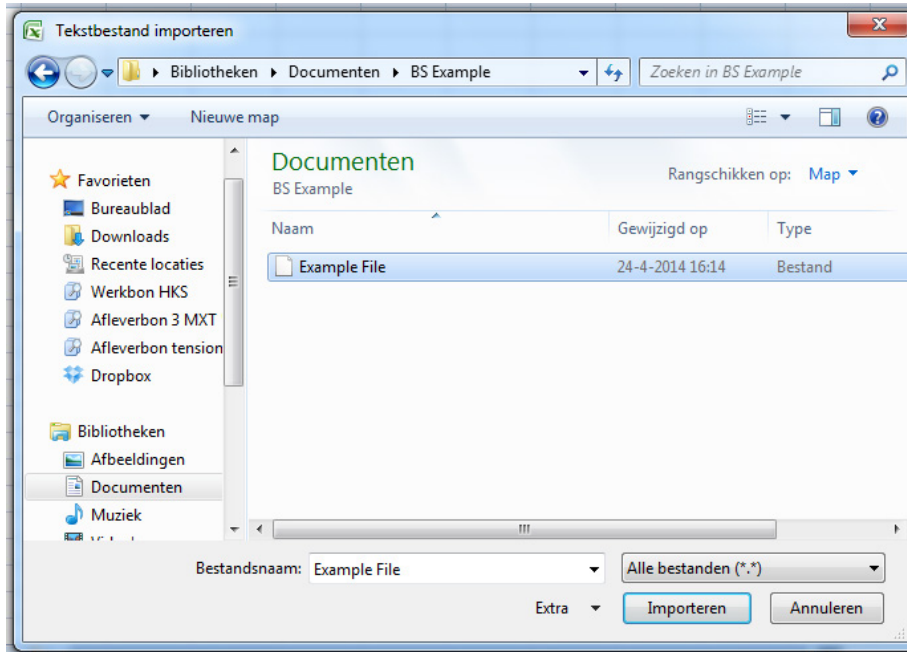
15. To store the measuring data you have to create a Log File. First, click on Store.
16. Select or create a folder on your computer, enter a file name and click on Save.



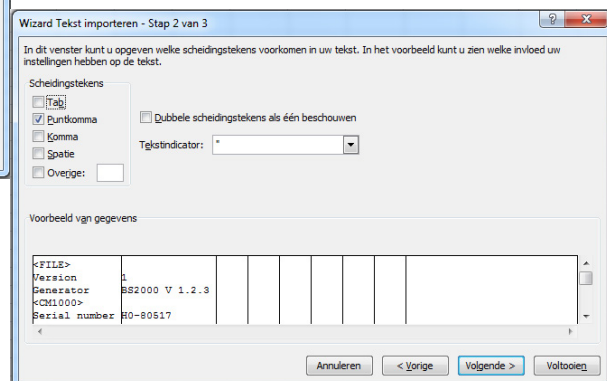
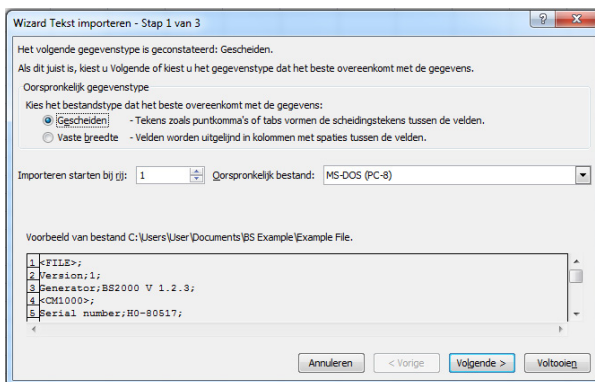
17. If you click on Store when a Log File is selected, all current measuring values will be added to the File.
18. If you would like to create a new Log File, click on New File and repeat step 13.
19. In order to have the system store automatically, you could set the Log interval. It is possible to set days, hours, minutes and seconds.
20. Click on Auto Store to start storing with the set interval.



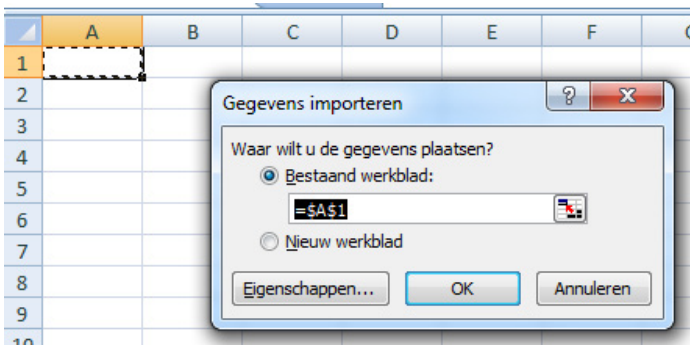
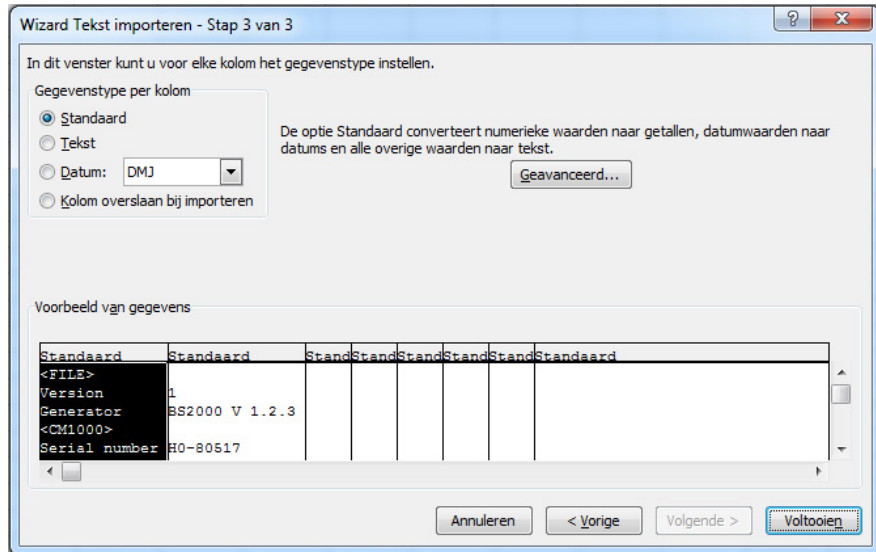
- At the bottom right just above Import, select “All Files” in the drop-down menu. Navigate to the folder where the Log File is stored, select the Log File and click on Import.



- Select Delimited - click on Next.
- Uncheck Tab and check Semicolon - click on Next.



7. Click on Finish.
8. Click on OK.



9. Now the measuring data is in a clear Excel sheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	<FILE>												
2	Version	1											
3	Generator	BS2000 V 1.2.3											
4	<CM1000>												
5	Serial number	H0-80517											
6	Version	2.5.0											
7	<WASHER>												
8	CM-Ch	101-1	101-2	101-3	101-4	101-5	101-6	101-7	101-8				
9	Serial number	33080001	NC	NC	NC	NC	NC	NC	NC				
10	Size	M33	NC	NC	NC	NC	NC	NC	NC				
11	Load range	48-480 kN	NC	NC	NC	NC	NC	NC	NC				
12	Load resolution	5 kN	NC	NC	NC	NC	NC	NC	NC				
13	Calibration date	27.01.2009	NC	NC	NC	NC	NC	NC	NC				
14	<LOG>												
15	D.M.Y-Tag	33080001	NC	NC	NC	NC	NC	NC	NC				
16	24.04.2014 16:06:53	115	0	0	0	0	0	0	0				
17	24.04.2014 16:08:42	115	0	0	0	0	0	0	0				
18	24.04.2014 16:08:52	115	0	0	0	0	0	0	0				
19	24.04.2014 16:09:02	120	0	0	0	0	0	0	0				
20	24.04.2014 16:09:12	115	0	0	0	0	0	0	0				
21	24.04.2014 16:09:22	115	0	0	0	0	0	0	0				
22	24.04.2014 16:09:32	115	0	0	0	0	0	0	0				
23	24.04.2014 16:09:42	115	0	0	0	0	0	0	0				
24	24.04.2014 16:09:52	115	0	0	0	0	0	0	0				

