

purpose

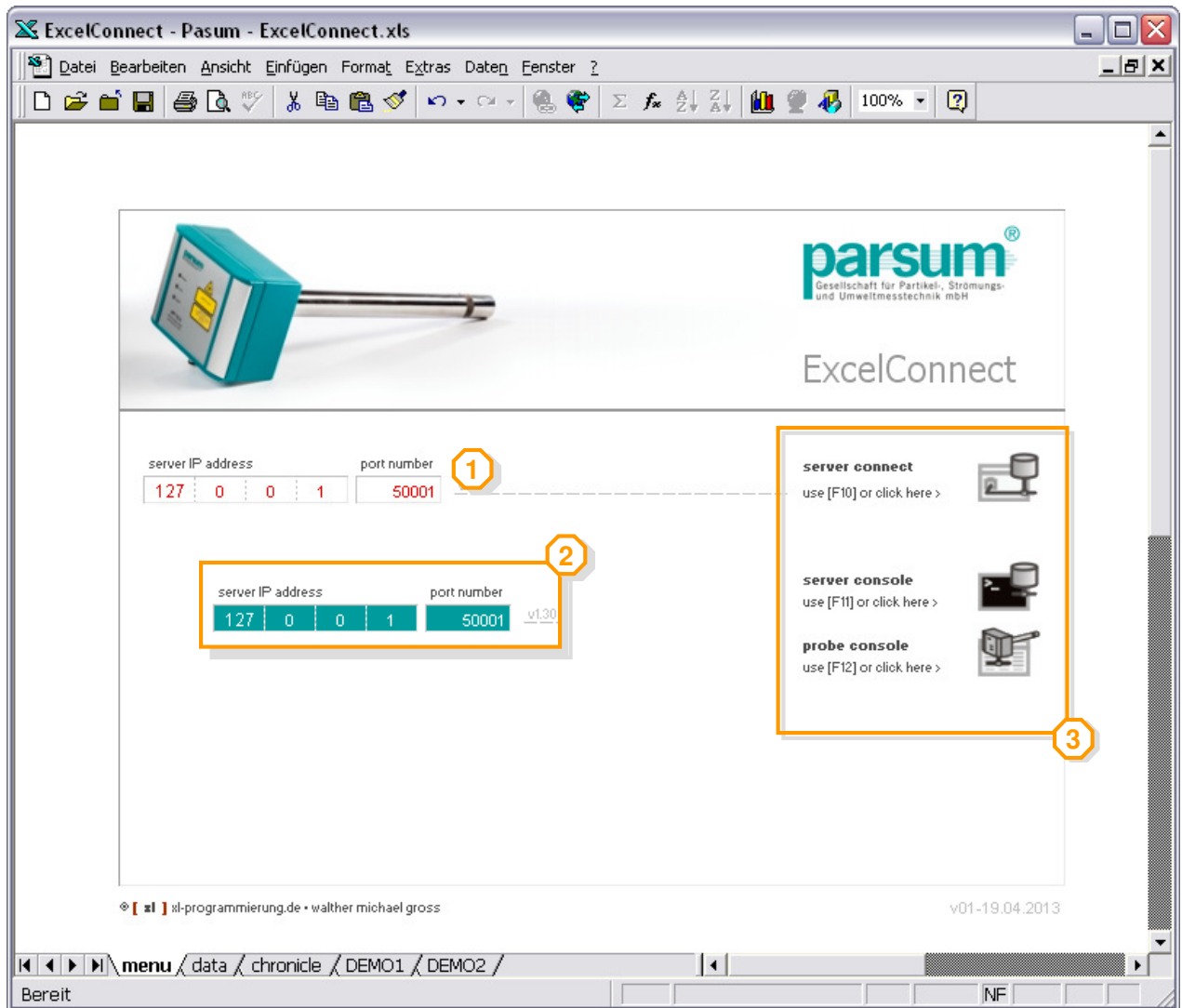


with ExcelConnect, you will be able to set up a server connection with the parsum „Inline Particle Probe“ server in order to monitor the probe information of the connected probe. ExcelConnect provides you two types of data monitoring: a static snapshot of all probe data and a list of all probe data in chronicle order (data log).

ExcelConnect is designed to perform within all excel versions from „excel 97“ onwards.

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(1) IP address & port no.

you may edit the server „IP address“ and „port no.“ within the [menu] tab before connecting to the „Inline Particle Probe“ server.

(2) connection status

the red font color for „IP address“ and „port no.“ indicates the disconnected server status (1). once turned into green, an active server connection persists (2).

(3) access the „server connect“



F10

click on the „server connect“ icon to access the form.

you might also press the [F10] key to open the form from any other file location.

access the „server console“



F11

click on the „server console“ icon to access the form.

you might also press the [F11] key to open the form from any other file location.

access the „probe console“



F12

click on the „server connect“ icon to access the form.

you might also press the [F12] key to open the form from any other file location.

the „server console“ and the „probe console“ can only be accessed if the server connection is established; the „server connect“ form will appear automatically if the server is disconnected.

purpose



within the connection form, the „Inline Particle Probe“ server can be connected or disconnected. ExcelConnect support the connection to a single probe, defined by its unique combination of „IP address“ and „port no.“ (please read through the „IPP“ manual to learn more about the access types, ip address and port number).

connect



- **open the connection form**
navigate to the [menu] tab and click the „server connect“ icon to access the form.
you might also press the [F10] key to open the connection form from any other file location.

The screenshot shows the ExcelConnect connection form. It has a title bar with 'ExcelConnect' and a close button. The main area features the Parsum logo and a server icon. Below the logo are two input fields: 'IP address' with the value '127. 0. 0. 1' and 'port no.' with the value '50001'. To the right of these fields are two buttons: 'connect' and 'close'. At the bottom left, there is a URL 'www.parsum.de' and a copyright notice '© [xl] www.xl-programmierung.de'.

- **IP address & port no.**
as long as the connection is not yet established, you may edit the server „IP address“ and „port no.“ within this form or within the [menu] tab.
- **connect**
press the „connect“ button to get connected with the „Inline Particle Probe“ server.
once ExcelConnect successfully connected to the server:
 - ExcelConnect will delete and overwrite the „data field“ and „value field“ range within the [data] tab and [chronicle] tab,
 - the „IP address“ and „port no.“ will be saved back to the [menu] tab and
 - the form will disappear automatically.
- **close**
press the „close“ button or press [Esc] to exit the form without connecting to the server.

disconnect



- **connection status**
the green server icon indicates an active server connection.
the red server icon indicates the disconnected server status.

The screenshot shows the ExcelConnect disconnect form. It has a title bar with 'ExcelConnect' and a close button. The main area features the Parsum logo and a server icon. Below the logo are two input fields: 'IP address' with the value '127. 0. 0. 1' and 'port no.' with the value '50001'. To the right of these fields are two buttons: 'disconnect' and 'close'. At the bottom left, there is a URL 'www.parsum.de' and a copyright notice '© [xl] www.xl-programmierung.de'.

- **disconnect**
press the „disconnect“ button to get disconnected from the „Inline Particle Probe“ server.
the form will disappear automatically once ExcelConnect successfully disconnected from the server.
- **close**
press the „close“ button or press [Esc] to exit the form without disconnecting from the server.

purpose

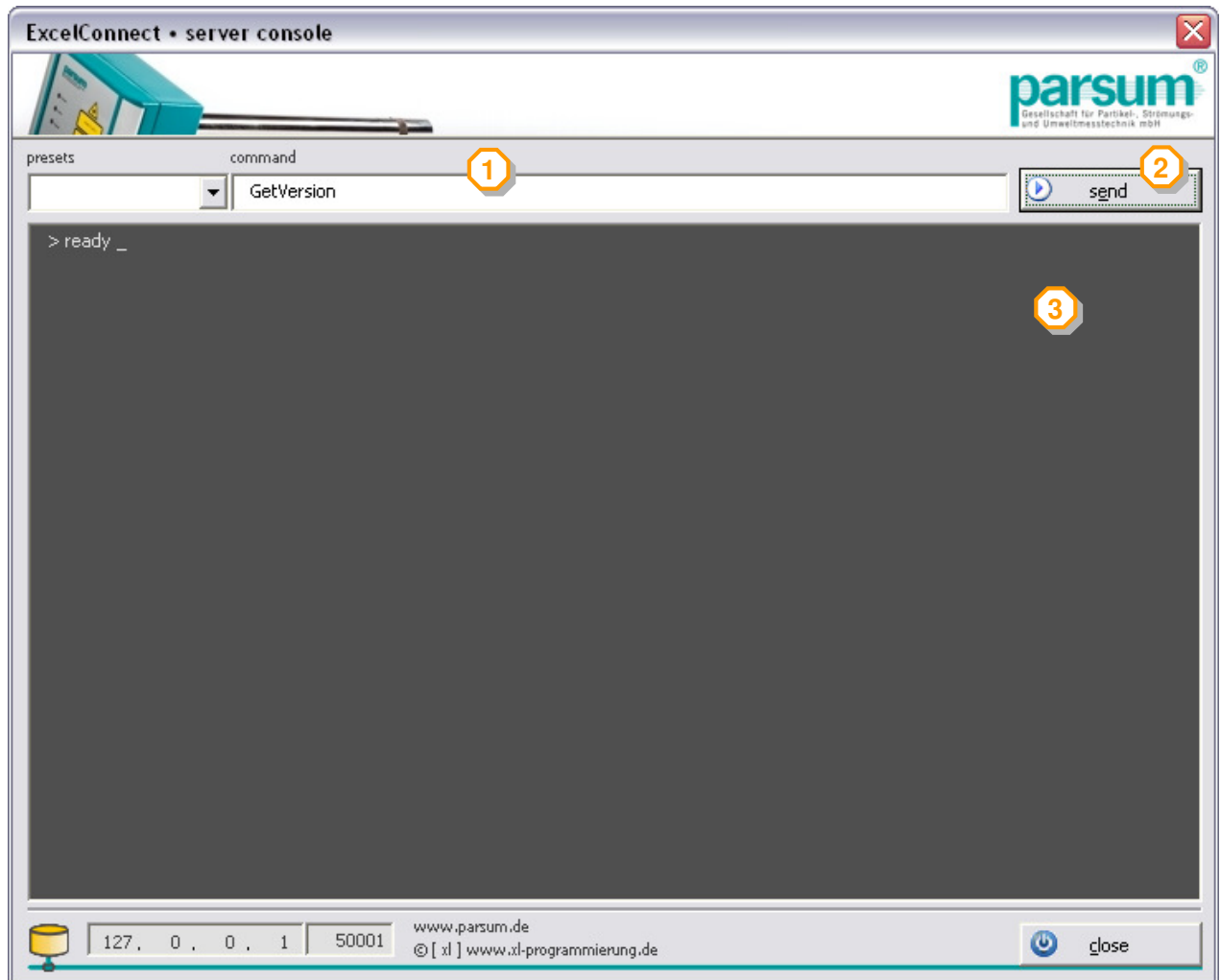


the „server console“ is a TCP/IP terminal which enables admins and advanced users to send any command to the currently connected „Inline Particle Probe“ server. the server response will be shown exclusively in the terminal form.

open the server console



navigate to the [menu] tab and click on the „server console“ icon to access the form.
you might also use the [F11] key to open the form from any other file location.



- **send a command**
to send a command to the „Inline Particle Probe“ server, type your command in the „command field“ (1) and click the „send“ button (2).
- **server response**
the server response will be shown exclusively in the terminal window (3).
please note: some response is delimited by semicolons; these will be replaced by linefeeds before displayed in the terminal window.
- **close**
press the „close“ button or press [Esc] to exit the form without disconnecting from the server.

commands



please refer to the „Inline Particle Probe“ documentation to learn more about the Parsum TCP communication and all available (Get-Data, Set-Data or Control) commands.

purpose



the „probe console“ provides two types of controls:

- (1) **probe controls** of the connected probe
(edit measure comment, start and stop measure) and
- (2) **monitoring controls** to monitor the connected probe within ExcelConnect
(edit monitoring settings, start and stop the monitoring).

open the probe console



navigate to the [menu] tab and click on the „probe console“ icon to access the form.
you might also use the [F12] key to open the form from any other file location.



- **close**
press the „close“ button (3) or press [Esc] to exit the form without causing further action.

open the probe console



navigate to the [menu] tab and click on the „probe console“ icon to access the form.
you might also use the [F12] key to open the form from any other file location.



full access or read-only server



the „Inline Particle Probe“ server offers two connection ports for each probe: a „Full Access“ and a „Read Only“ connection. a full access server connection is required to execute the probe controls.

- **run measure**

press the „RUN measure“ button (1) to start the measure of the connected probe.

ExcelConnect will delete the „value field“ range within the [data] and [chronicle] tab.



- **stop measure**

press the „STOP measure“ button (2) to stop the measure of the connected probe.

- **edit**

press the „edit“ button (3) to edit the measure comment.

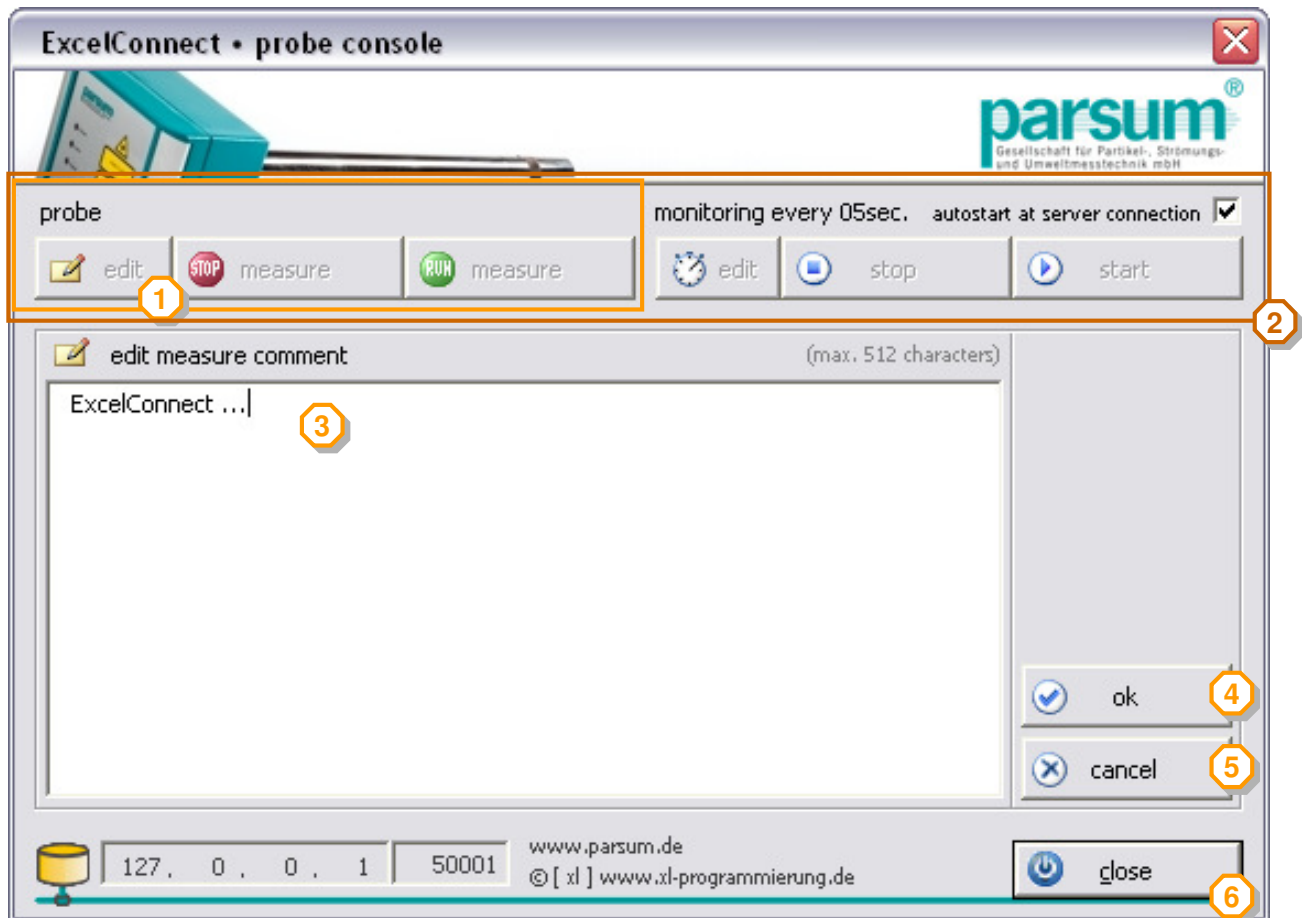
- **close**

press the „close“ button (4) or press [Esc] to exit the form without causing further action.

edit measure comment



open the „probe console“ and press the „edit“ button (1) to edit the measure comment:



full access or read-only server



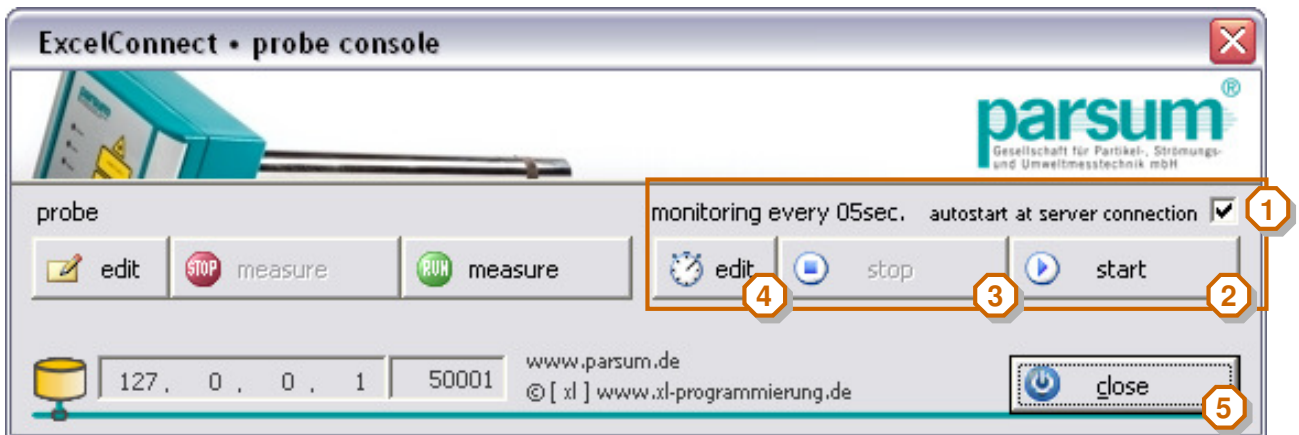
the „probe controls“ and „monitoring controls“ (2) are disabled as long as the „edit measure comment“ is activated.

- **edit measure comment**
the current comment to the measurement will be loaded into the comment field (3) while accessing the edit function. the comment information is limited to a maximum of 512 characters.
- **save measure comment**
press the „ok“ button (4) to send the adjusted comment to the probe server.
once the server accepted and saved the new comment :
 - the edit field will be closed automatically and
 - the „probe controls“ and „monitoring controls“ (2) will be enabled.
- **cancel editing**
press the „cancel“ button (5) to return to the „probe console“ without saving changes to the measure comment. the „probe controls“ and „monitoring controls“ (2) will be enabled.
- **close**
press the „close“ button (6) or press [Esc] to exit the form without causing further action.

open the probe console



navigate to the [menu] tab and click on the „probe console“ icon to access the form.
you might also use the [F12] key to open the form from any other file location.



(1) autostart monitoring



once connected to the server, ExcelConnect will start automatically monitoring the probe if the autostart option is enabled. you may switch off the autostart while editing ExcelConnect or its sole use as a server terminal to avoid unrequested data updates while connecting to the server.
per default, the autostart option is activated.

- **start monitoring**

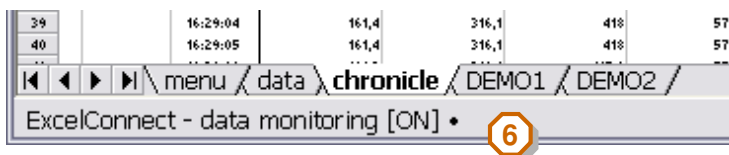
press the „start“ button (2) to start monitoring the connected probe within ExcelConnect.

ExcelConnect will delete the „value field“ range within the [data] and [chronicle] tab. 

you might close the probe console while the monitoring continues.

- **monitoring status**

as long as the monitoring is running, your excel statusbar will be activated and display the „data monitoring [ON]“ status (6).



- **stop monitoring**

press the „stop“ button (3) to stop the ExcelConnect from monitoring the connected probe.
the statusbar note „data monitoring [ON]“ disappears, indicating that the monitoring has stopped.

- **edit**

press the „edit“ button (4) to edit the monitoring settings.

stop monitoring to edit



the monitoring must be stopped in order to edit the monitoring settings.

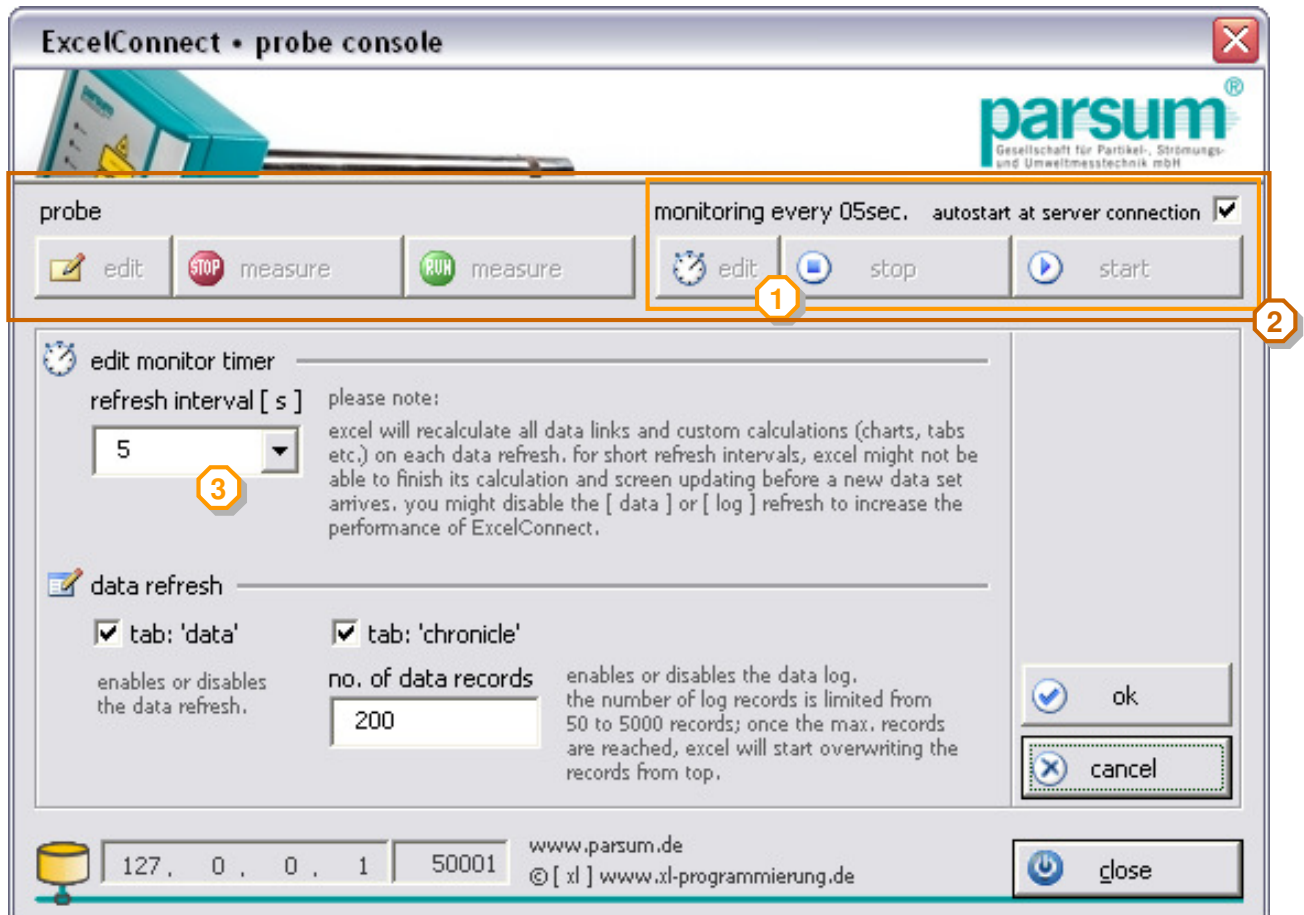
- **close**

press the „close“ button (5) or press [Esc] to exit the form without causing further action.

edit measure comment



open the „probe console“ and press the „edit“ button (1) to edit the monitoring settings:



edit monitor timer



- **refresh interval**
ExcelConnect will retrieve the latest probe information recurring based on the „refresh interval“ (3) as long as the monitoring is running. per default, ExcelConnect will overwrite the [data] tab and amend the [chronicle] tab on each refresh interval.

file performance

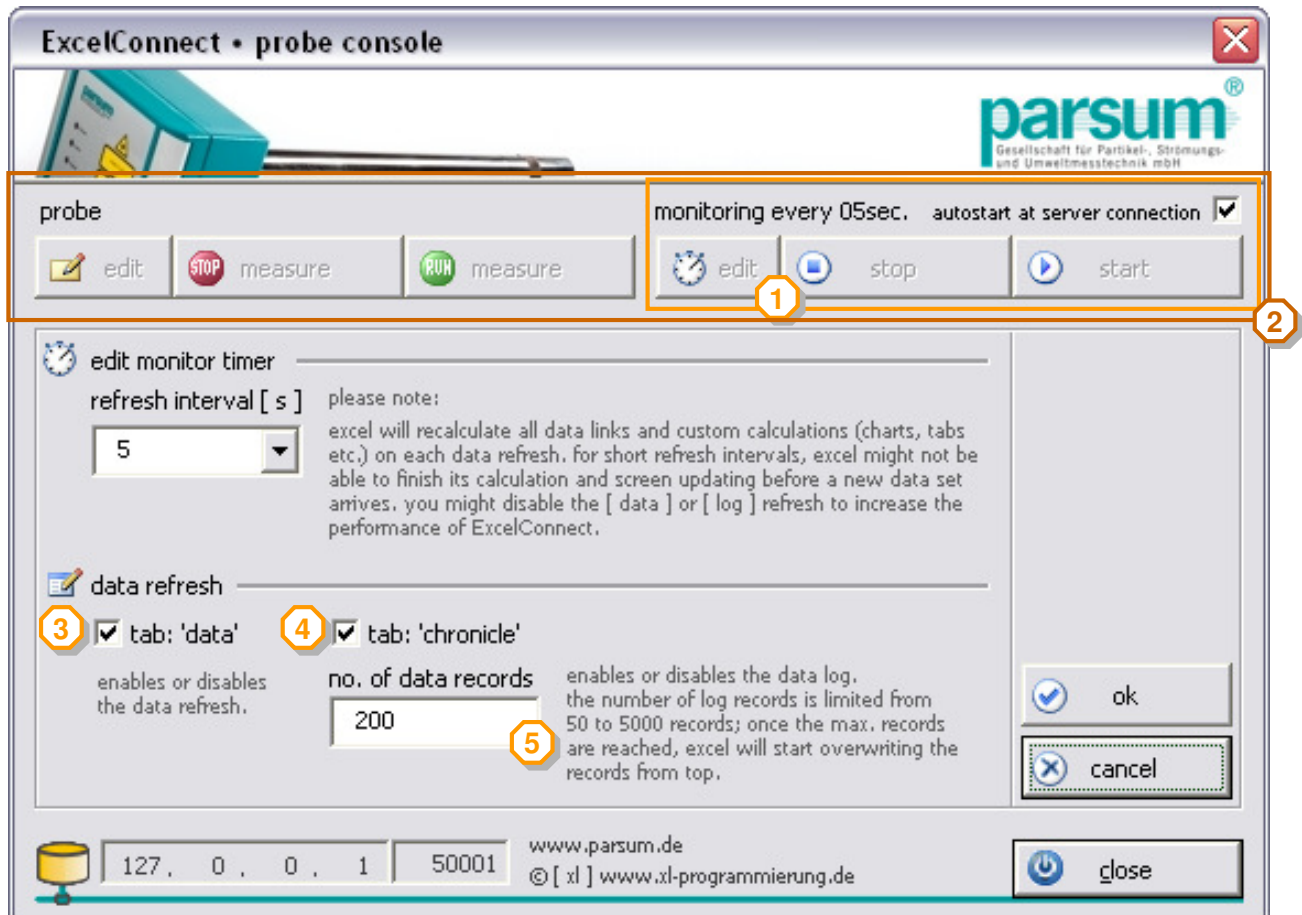


on each data refresh, excel will recalculate all data links and custom calculations (charts, tabs etc.), assuming that your excel calculation settings are set to „automatic“.
for short refresh intervals, excel might not be able to finish its calculation and screen updating before a new data set arrives. in case you face performance issues while the monitoring is running, you might increase the refresh interval.

edit measure comment



open the „probe console“ and press the „edit“ button (1) to edit the monitoring settings:



data refresh



- **data refresh within tab [data]**
the [data] tab represents a snapshot of all information available from the connected probe. ExcelConnect will update the [data] tab as long as the data refresh is enabled (3) and the monitoring is running. the [data] tab content will be overwritten at any refresh interval.
- **data refresh within tab [chronicle]**
the [chronicle] tab lists all information available from the connected probe in chronicle order by rows (data log). ExcelConnect will amend the [chronicle] tab as long as the data refresh is enabled (4) and the monitoring is running.
- **no. of data records**
as the number of logged records is limited within the [chronicle] tab, ExcelConnect will start overwriting the records from top once the maximum no. of records are reached. you can adjust the no. of logged records between 50 and 5000 records within the „no. of data records“ field (5).

file performance

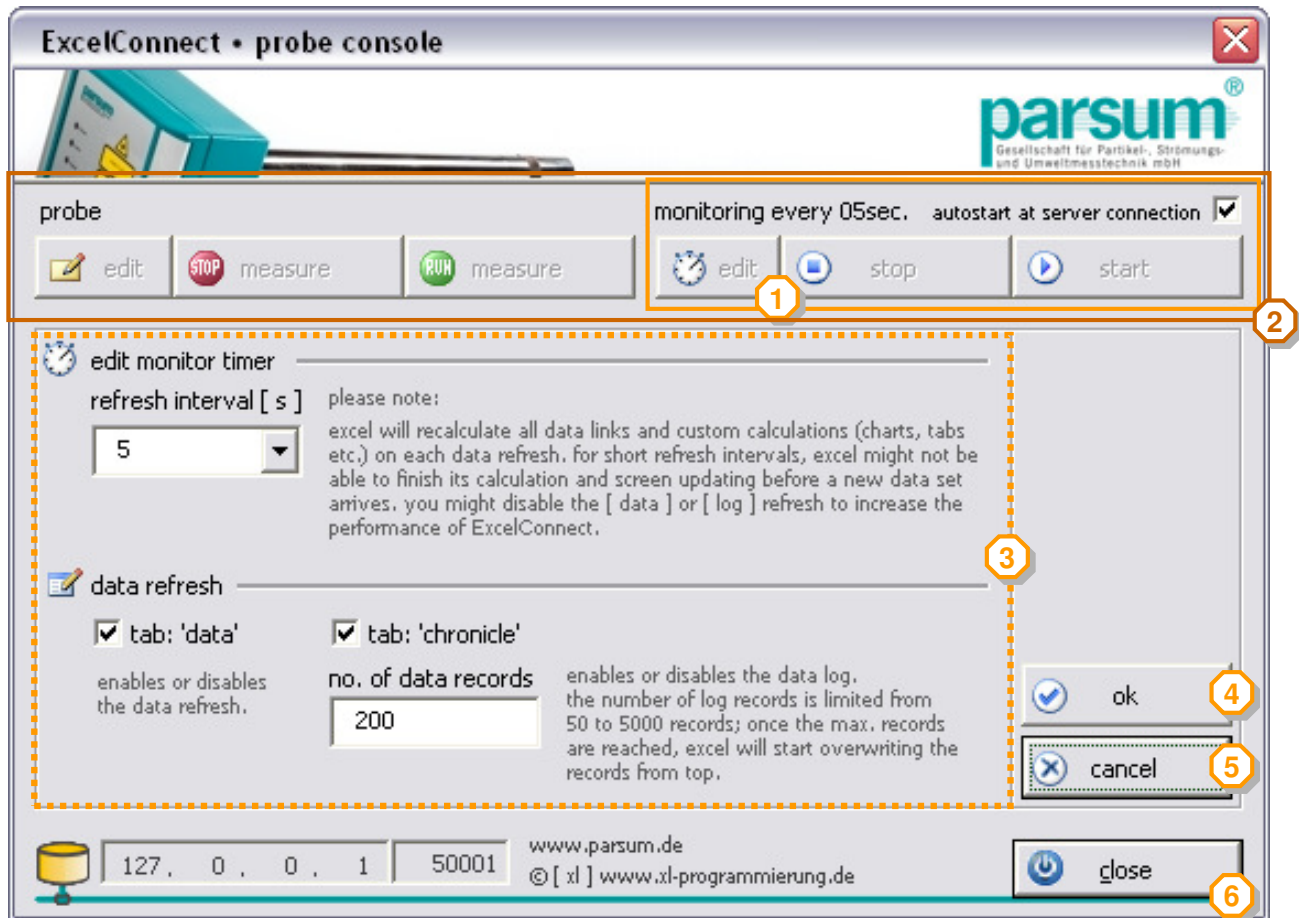


on each data refresh, excel will recalculate all data links and custom calculations (charts, tabs etc.), assuming that your excel calculation settings are set to „automatic“.
while increasing the maximum no. of data records, excel might not be able to finish its calculation and screen updating before a new data set arrives; in case you face performance issues while the monitoring is running, you might decrease the number of data records. also, you might disable the [data] tab or [chronicle] tab refresh if currently not needed.

edit measure comment



open the „probe console“ and press the „edit“ button (1) to edit the monitoring settings:



- **edit the monitor settings**
press the „edit“ button (1) to edit the monitoring settings (3).
the monitoring must be stopped in order to edit the monitoring settings.
- **save monitoring settings**
press the „ok“ button (4) to save the adjusted monitoring settings:
 - the edit field will be closed automatically and
 - the „probe controls“ and „monitoring controls“ (2) will be enabled.
- **cancel editing**
press the „cancel“ button (5) to return to the „monitoring console“ without saving changes.
the „probe controls“ and „monitoring controls“ (2) will be enabled.
- **close**
press the „close“ button (6) or press [Esc] to exit the form without causing further action.

ID	fields	values
32	Q0-quantil01 partition [%]	50,00
33	Q0-quantil02 partition [%]	75,00
34	Q0-quantil03 partition [%]	90,00
35	Q3-quantil01 partition [%]	50,00
36	Q3-quantil02 partition [%]	75,00
37	Q3-quantil03 partition [%]	90,00
38	velocity-quantil01 partition [%]	50,00
39	velocity-quantil02 partition [%]	75,00
40	velocity-quantil03 partition [%]	90,00
41	Sieve00 [µm]	
42	Sieve01 [µm]	62,00
43	Sieve02 [µm]	125,00
44	Sieve03 [µm]	250,00
45	Sieve04 [µm]	500,00
46	Sieve05 [µm]	1.000,00
47	Sieve06 [µm]	2.000,00
48	Sieve07 [µm]	4.000,00
49	Sieve08 [µm]	
50	Sieve09 [µm]	
51	Sieve10 [µm]	
52	×01,3 [µm]	161,40
53	×10,3 [µm]	316,20
54	×25,3 [µm]	418,40
64	Fraction04 [%] (S04...S05)	57,60
65	Fraction05 [%] (S05...S06)	6,00

(1) data fields

the „data field“ range represents a one-dimensional list containing all available data fields of the currently connected probe. ExcelConnect will overwrite the data fields automatically while connecting to the server.

(2) value fields

the „value field“ range represents a two-dimensional list containing all available data values of the currently connected probe. ExcelConnect will delete the data values automatically while connecting to the server.

sheet protection



the [data] tab is protected against adjustments such as adding rows and columns in order to assure the data dump into a static location which you can use as a source for your custom calculation and data visualization.

	A	B	C	BC	BD	BE	BF	BG	BH	BI
6	parsum® Gesellschaft für Partikel-, Strömungs- und Umweltmesstechnik mbH									
7										
8										
9	ID	Time		x01.3 [µm]	x10.3 [µm]	x25.3 [µm]	x50.3 [µm]	x63.3 [µm]	x75.3 [µm]	x90.3 [µm]
10	4/20/2013	16:33:29		161,4	316,1	418	571,6	651,9	740,5	901,5
11	4/20/2013	16:33:30		161,3	316,1	417,9	571,6	651,9	740,5	901,5
12	4/20/2013	16:33:31		161,4	316,1	418	571,6	651,9	740,5	901,5
13	4/20/2013	16:33:32		161,4	316,1	418	571,6	651,9	740,5	901,5
14	4/20/2013	16:33:35		161,4	316,1	418	571,6	651,9	740,5	901,5
15	4/20/2013	16:33:37		161,4	316,1	418	571,6	651,9	740,5	901,5
16	4/20/2013	16:33:38		161,4	316,2	418	571,6	651,9	740,5	901,5
17	4/20/2013	16:33:39		161,4	316,1	418	571,6	651,9	740,5	901,5
18	4/20/2013	16:33:40		161,4	316,1	418	571,6	651,9	740,5	901,5
19										
20										
21										
22										
23										
24		16:28:48		161,4	316,1	418	571,6	651,9	740,5	901,5
25		16:28:49		161,4	316,2	418	571,6	651,9	740,5	901,5
26		16:28:50		161,4	316,1	418	571,6	651,9	740,5	901,5
27										
28		16:29:03		161,4	316,1	418	571,6	651,9	740,5	901,5
29		16:29:04		161,4	316,1	418	571,6	651,9	740,5	901,5
30		16:29:05		161,4	316,1	418	571,6	651,9	740,5	901,5
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(1) data fields

the „data field“ range represents a one-dimensional list containing all available data fields of the currently connected probe. ExcelConnect will overwrite the data fields automatically while connecting to the server.

(2) chronicle fields

the „chronicle field“ range represents a one-dimensional list containing the date and time of each data refresh and goes along with the „value fields“. however, the „chronicle fields“ are generated by ExcelConnect and do not represent data retrieves from the connected probe !

(3) value fields

the „value field“ range represents a two-dimensional list containing all available data values of the currently connected probe in a recurring chronicle order (data log).

ExcelConnect **will NOT delete** the data values automatically **while connecting** to the server !

sheet protection



the [chronicle] tab is protected against adjustments such as adding rows and columns in order to assure the data dump into a static range which you can use as a source for your custom calculation and data visualization.