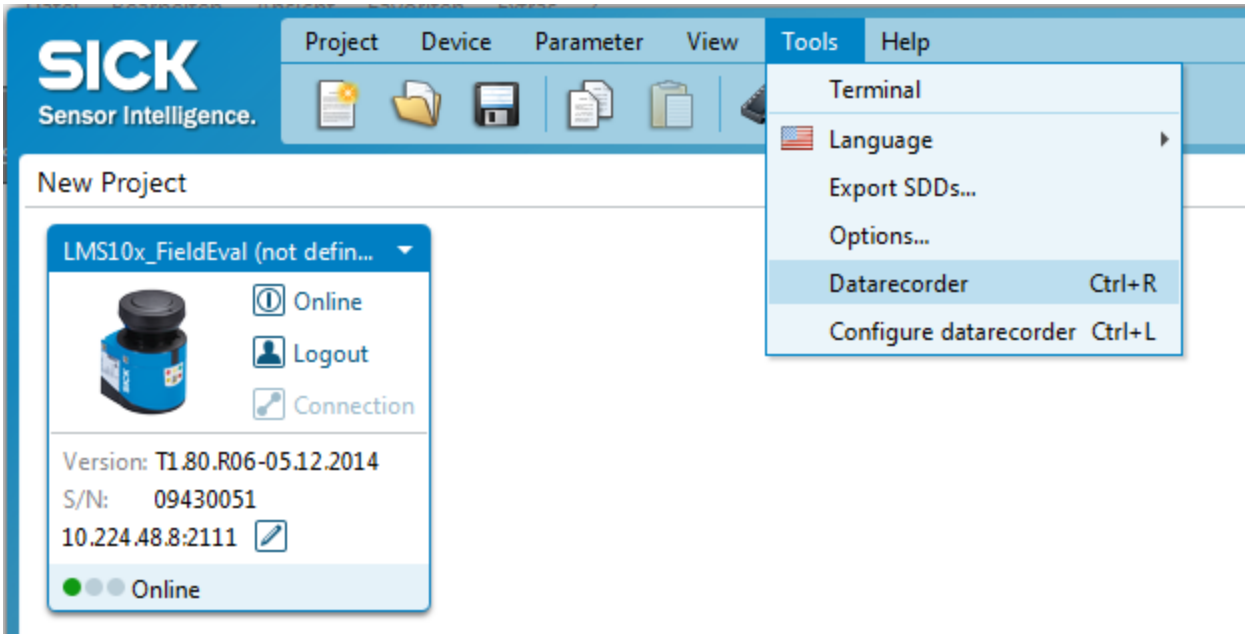
Record measurement data

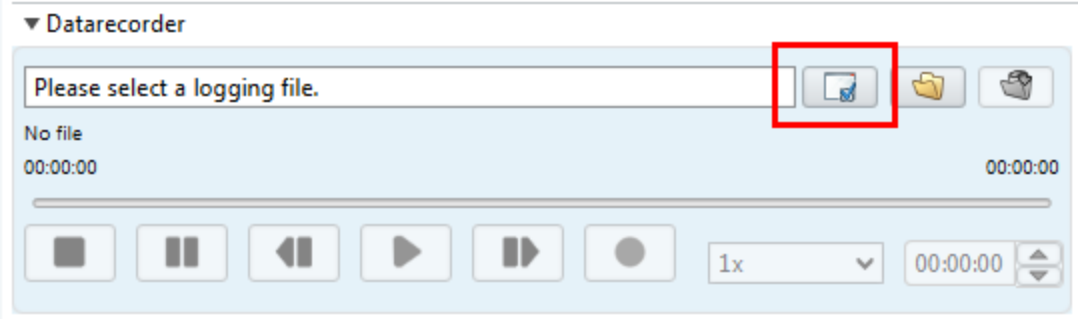
1. Choose the data recorder in Sopas



Recorder opens at bottom left.

2. Open a new recording

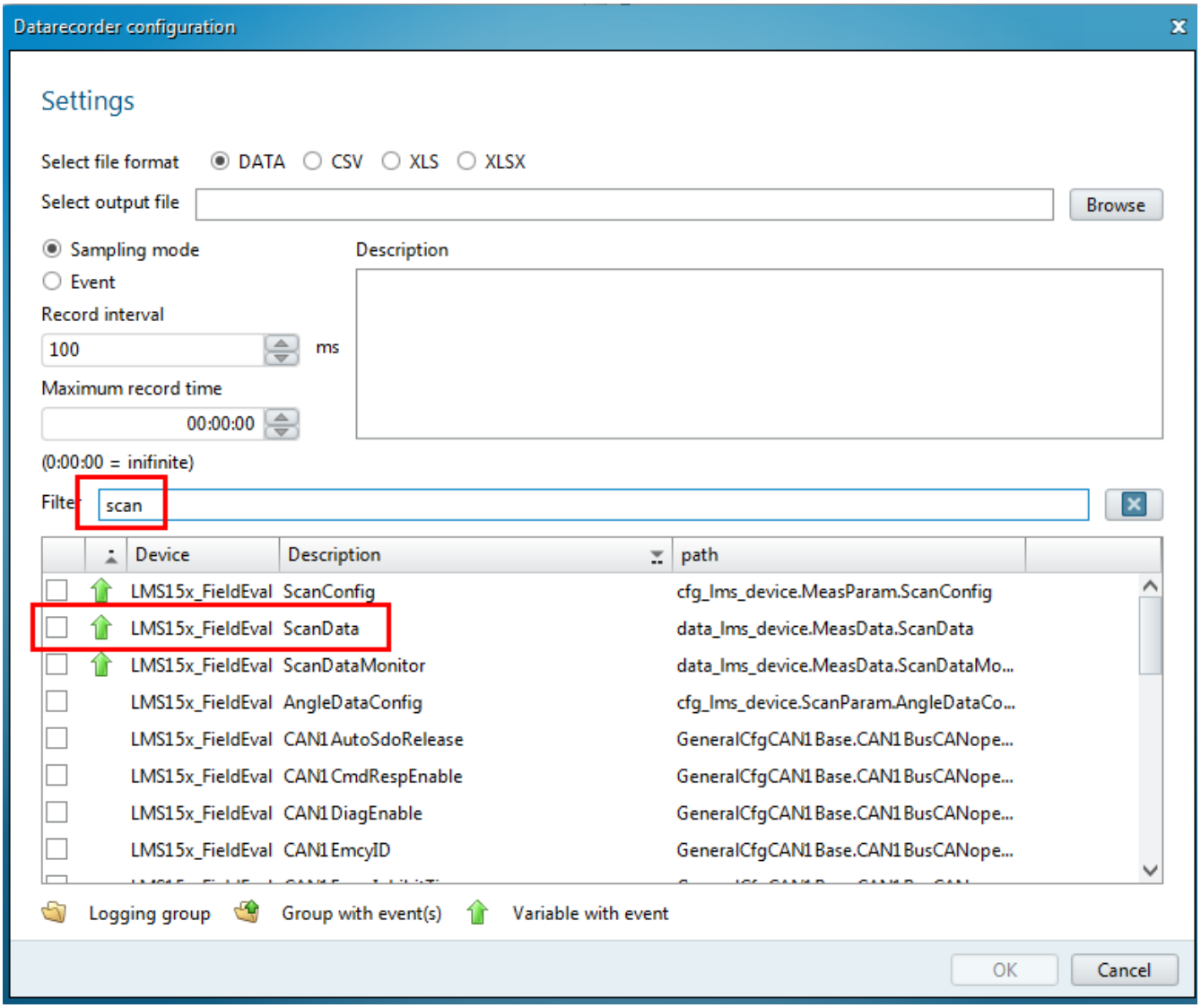
If you want to make a complete new recorder file, klick on the Configure Button



3. choose a parameter to record

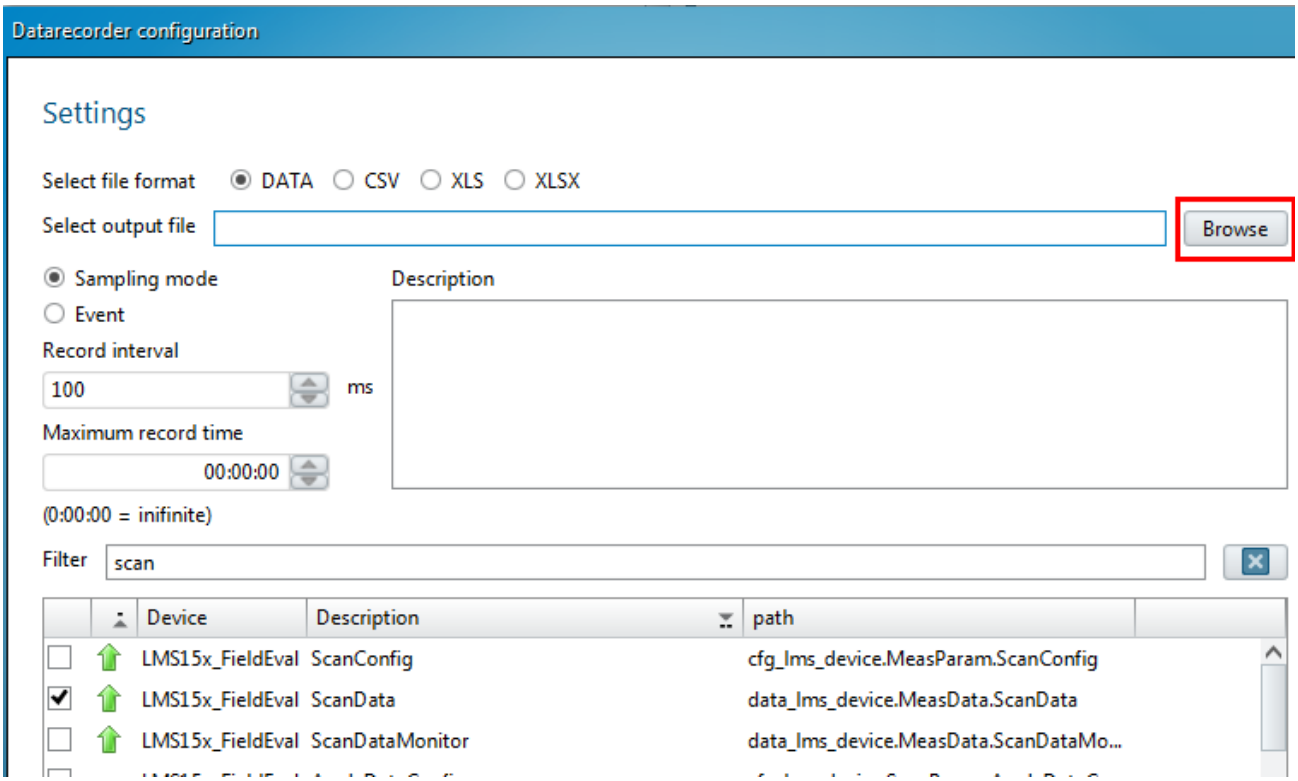
Than a window opens where you can choose all possible values to record. (Possible Parameters described below)
There the parameter which is to record can be chosen. Easiest way to find it in the list is to type the name of the parameter or a part of it in the filter.

Than click the checkbox to choose the value.

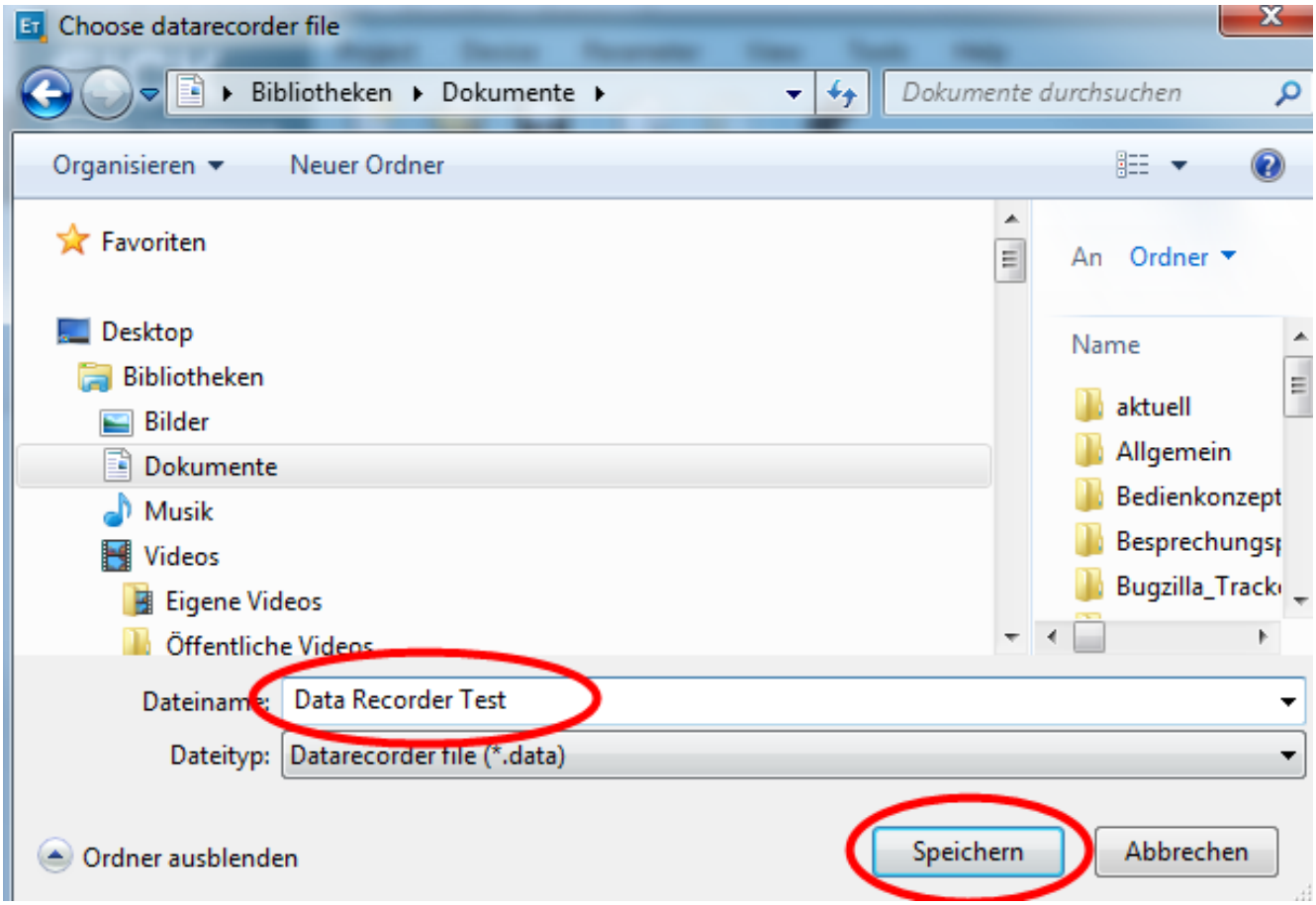


4. Select an output file

In the same window, klick on "browse" to select a folder and a name for the new recorder file.



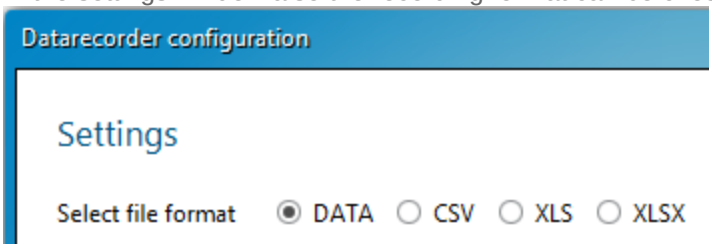
A window opens where you have to choose a directory to save the file and type in a name for the file



Click Save.

5. Choose a record format

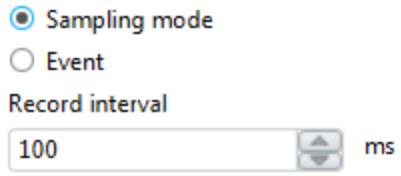
In the settings window also the recording format can be chosen.



Choose the option you want.
If you choose XLS directly here, no exporting to an excel file after the recording is necessary.

6. Choose the Record mode

On the settings page, also choose the record mode:

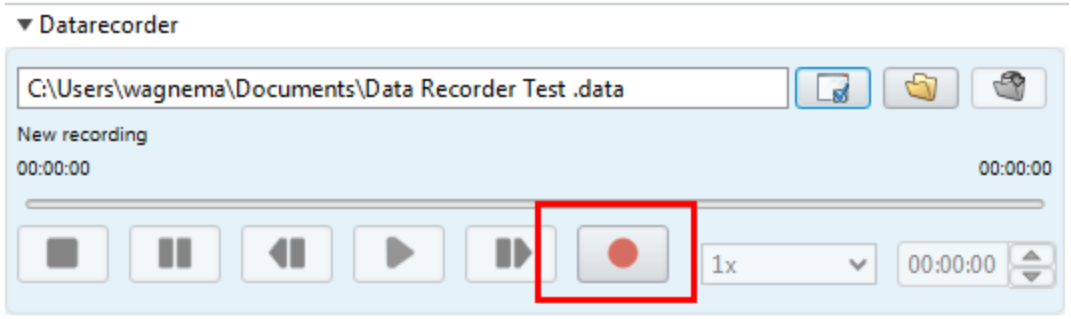


7. finalize the setup

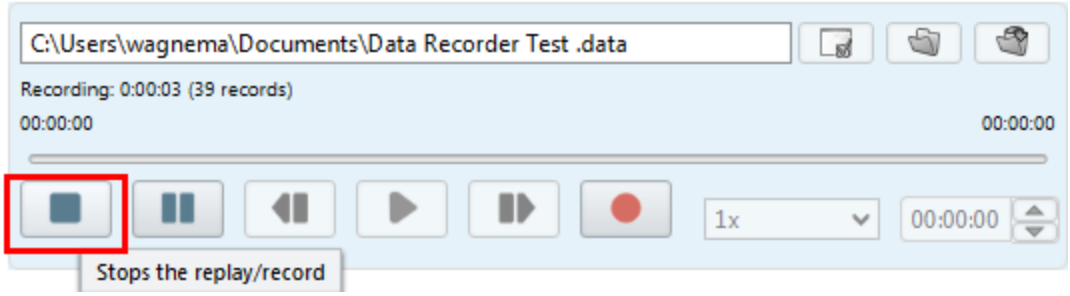
With the OK Button you can finalize the setup.

8. start the recording

With clicking on the "Record" Button, the recording is started until either the record time is reached or the Stop button is clicked.



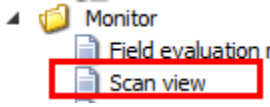
Stopping the recording with the stop button.



Playback data

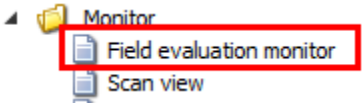
!!Attention!!
With Sopas 2.38 it is not possible to playback the data with an other device except the one which recorded the data.
Sopas 3 can replay the data independent from the device.
Depending on what data was recorded, the correct monitor has to be used for replaying the data.
If the parameter "ScanData"

was recorded, use the "Scan View" to replay the data:



If the parameter "ScanDataMonitor"

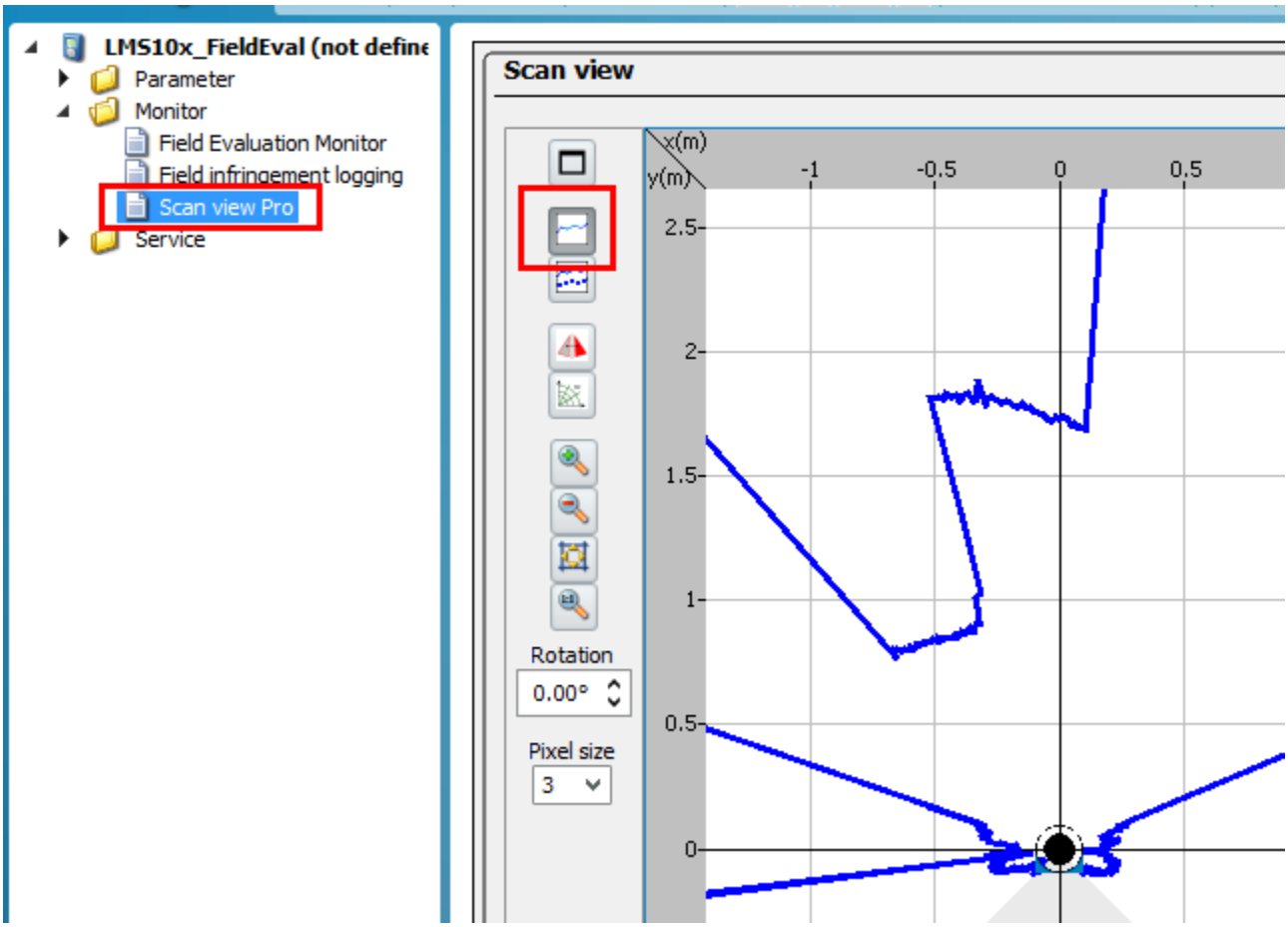
was recorded, use the "Field evaluation monitor" to replay the data:

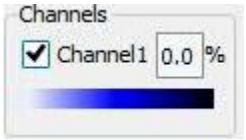


The other way round is not possible.

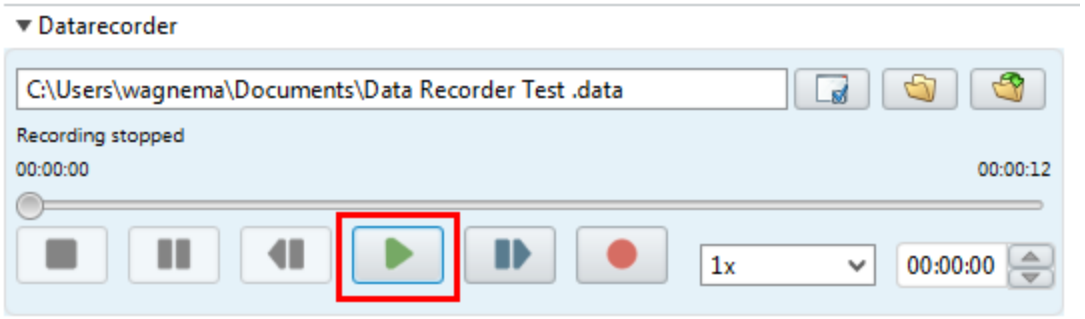
Process for recorded "ScanData":

Open the "Scan View" (available up from userlevel "Authorized Client") of the device and turn on the scan line and activate the channel.

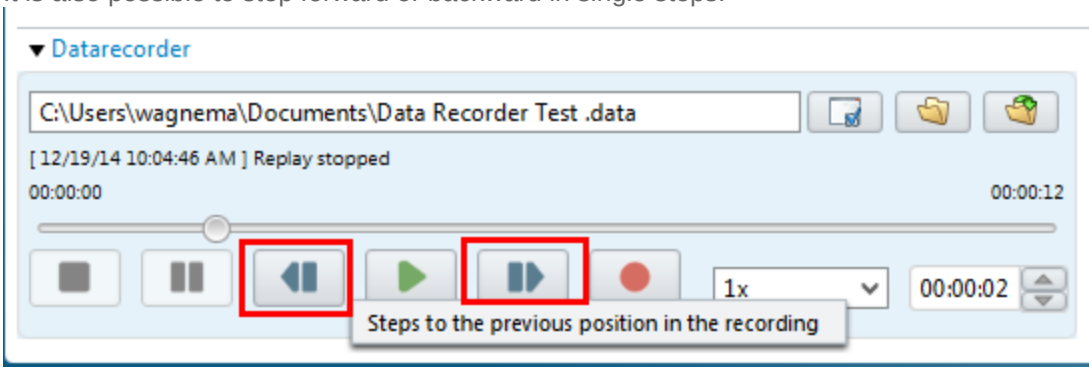




start the playback of the recorded data.



Than the data is played back continously as recorded.
It is also possible to step forward or backward in single steps.



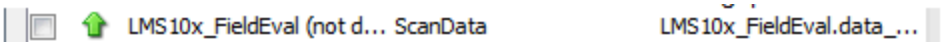
Process Summary

- Select Tools
- Select the data recorder
- open Settings
- choose settings
- choose the Parameter to record
- choose a new file name
- choose a record mode
- start the recording
- see the number of recorded scans
- stop the recording
- open the correct monitor depending on the recorded data
- turn the scanline on if necessary
- start the replay (scanner will go offline)
- step forward/backwards in the replay

Description of record parameters

Examples of parameters to record. Easiest way to find the parameter is to type the name of it into the filter field.

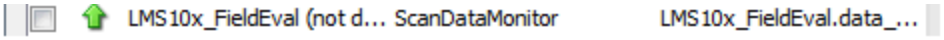
ScanData



Measurement data which is shown in the -Scan View Pro-. All values are given out. Telegram format is the same as for the variable "ScanDataMonitor"

Attention: if all echoes of the LMS5xx have to be recorded, then activate in the Filter option "All echoes" before starting the record function.

ScanDataMonitor



That are the measurement data which are shown in the -field evaluation monitor-. As the data output for the Field evaluation monitor is reduced to 1/5th also the recorded data is reduced here. If a scan frequency of 50Hz is used, only every 10th value is given out (25Hz, every 5th).

Telegram format is the same as for the variable "ScanData"

Output State

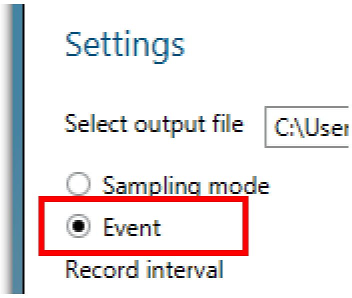
Records the state of all outputs. Format is like the telegram "LIDoutputstate" (see Telegram Listing)

Field infringement logging list

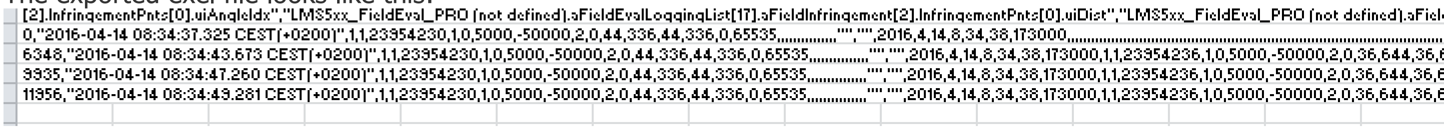
Records the field infringemet from Sopas:

5	01.01.1970	00:31:49,485	2	-68	387	100.0	393
4	01.01.1970	00:31:47,094	2	-76	430	100.0	437
3	01.01.1970	00:31:43,544	2	-37	472	94.5	473
2	01.01.1970	00:31:26,393	2	-98	442	102.5	453
1	01.01.1970	00:31:21,444	2	-149	243	121.5	285

By replaying the recorded file, you can review in Sopas on the Field infringement logging page the field infringements.
It is recommended, to record this parameter not in Sampling mode but in "Event" because in Sampling mode with every samling step, the whole list is recorded.
If you take the "Event", than the recorded list gets only a new entry if there was a new field infringement.
You can set this up in the settings of the data recorder:



The exported exel file looks like this:



```
[2].InfringementPnts[0].uiAngleIdx","LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[17].aFieldInfringement[2].InfringementPnts[0].uiDist","LMS5xx_FieldEval_PRO (not defined).aFiel
0,"2016-04-14 08:34:37.325 CEST(+0200)",1,1,23954230,1,0,5000,-50000,2,0,44,336,44,336,0,65535,,,,,,,,,,,,,,"","",2016,4,14,8,34,38,173000,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
6348,"2016-04-14 08:34:43.673 CEST(+0200)",1,1,23954230,1,0,5000,-50000,2,0,44,336,44,336,0,65535,,,,,,,,,,,,,,"","",2016,4,14,8,34,38,173000,1,1,23954236,1,0,5000,-50000,2,0,36,644,36,6
9935,"2016-04-14 08:34:47.260 CEST(+0200)",1,1,23954230,1,0,5000,-50000,2,0,44,336,44,336,0,65535,,,,,,,,,,,,,,"","",2016,4,14,8,34,38,173000,1,1,23954236,1,0,5000,-50000,2,0,36,644,36,6
11956,"2016-04-14 08:34:49.281 CEST(+0200)",1,1,23954230,1,0,5000,-50000,2,0,44,336,44,336,0,65535,,,,,,,,,,,,,,"","",2016,4,14,8,34,38,173000,1,1,23954236,1,0,5000,-50000,2,0,36,644,36,6
```

Wit every event, the whole List is recorded, so you get additional in each row. You can see in the first row, there is just one block of values. In the second row there are two blocks, in the third row there are 3 blocks and so on.

That are the single field infringements.

The meaning of the values is as follows:

Example:

```
100,"2016-04-14 08:31:27.093 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535,,
200,"2016-04-14 08:31:27.193 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535,,
300,"2016-04-14 08:31:27.293 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535,,
400,"2016-04-14 08:31:27.393 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535,,
500,"2016-04-14 08:31:27.493 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535,,
600,"2016-04-14 08:31:27.593 CEST(+0200)",1,1,23953876,1,0,5000,-50000,2,0,79,144,79,144,0,65535
```

100, 200, 300,.... = ms since start of the recording

"2016-04-14 08:31:27.093 CEST(+0200)" = Time when the telegram was recorded

1 = Version Number ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].uiVersionNo")

1 = Eval Case Number ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.usiNumber")

23953876 = Time since start up in µs ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.udiSysCount")

1 = Scale Factor ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.dDistScaleFactor")

0 = Scale Factor Offset ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.dDistScaleOffset"

5000 = Angular resolution ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.uiAngleScaleFactor"

-50000 = Start angle ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].CaseHdr.iAngleScaleOffset"

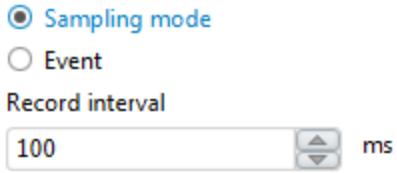
2 = Result Evaluation Case ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].eCaseResult" --> This result depends on the settings of the evaluation case. For a normal field infringement with no inversion of the EVC 2 = infringed
0 = not used ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].aFieldInfringement[0].eType",
79 = Angle of the startpoint from the field infringement ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].aFieldInfringement[0].InfringementPnts[0].uiAngleIdx"
144 = Distance of the startpoint from the field infringement ("LMS5xx_FieldEval_PRO (not defined).aFieldEvalLoggingList[0].aFieldInfringement[0].InfringementPnts[0].uiDist" --> The last two values are the values of the field infringement position. All the Rest is not used and not filled data.

-->-->--> ATTENTION: Recording of that value is not an official function. It is available in the data recorder by default. So don't give this to customers, that is only internal information.
We can also give no more informations than the ones mentioned here.

Record mode

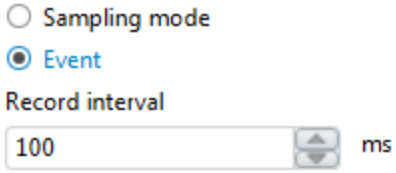
Sampling Mode

Every x seconds, the variable is read from the sensor and saved in the log file. It doesn't matter if the variable has changed, just the actual value is recorded.



Event

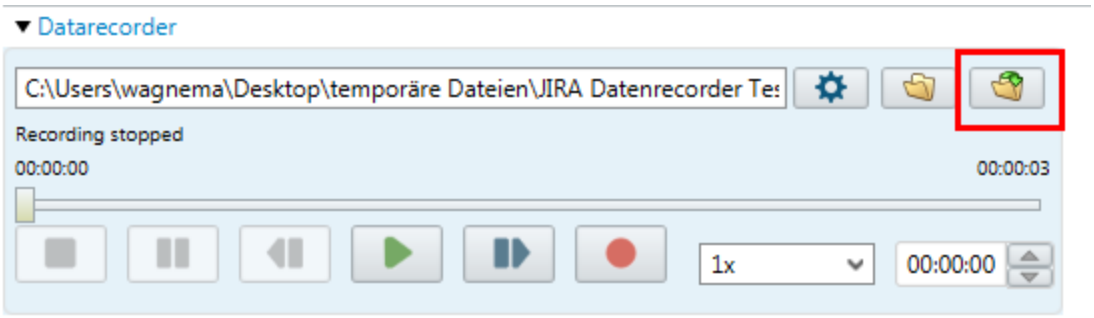
The event is registered and the value of the variable is saved any time it changes, so with every event (change of the variable) the value is saved but nothing inbetween several events.



If Events are recorded, the Record interval is not used.

Export of recorded data into a file

Use the marked button.



On the window that opens then choose the recorded data that should be exported. On the next page browse for a save folder and choose a file type.
If you want to export recorded data to a file, than export files recorded with Sopas 3 to a .XLSX file.
A XLS file will be too small and cannot be imported into an old Excel version and a CSV file will fill all values into the first column.
Only an XLSX file will put every value in a single column so that you get useful file.

maximum size of recorded files for export

Because of the memory size Sopas is able to handle (because that are all 32bit processes), the maximum size of a data file that should be exported to a CSV file must no exceed 1GB.