



# User's guide



## DDS2011 Interface for VA4Pro

### Application :

- ☞ Transfer and archiving of data from instrument VA4Pro to DDS2011
- ☞ Transfer route from DDS2011 to instrument VA4Pro

*Ref: 21022011 MK2*

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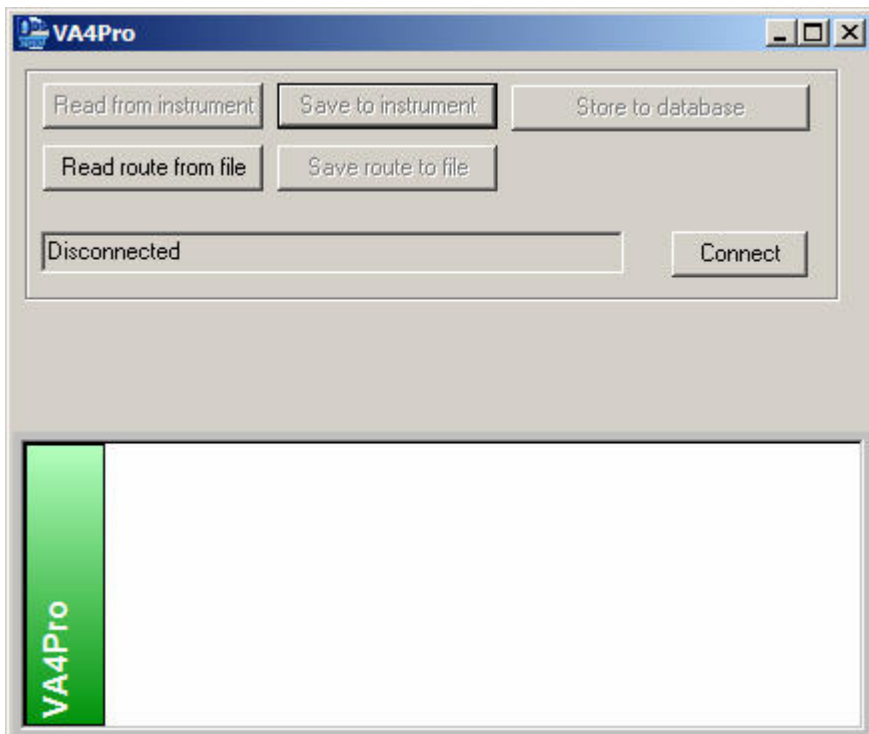
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## Connecting VA4Pro with DDS2011

From menu choose **Tools / Connect instrument / VA4Pro**.



Click on „Connect“ and connect VA4Pro to the computer with USB cable.

## Creating the route

Let assume we have already tree in DDS database with route measurements. Tree is in V DDS recommended form - Tree/ Machine/Measurement Point/ Data Cells (mode in DDS2011 manual). Data Cells are for instrument VA4Pro and have set the flag "Transfer to route". Supported data types are static, spectrum, time waveform, 2-channel wave form (orbit), order analysis and APS.

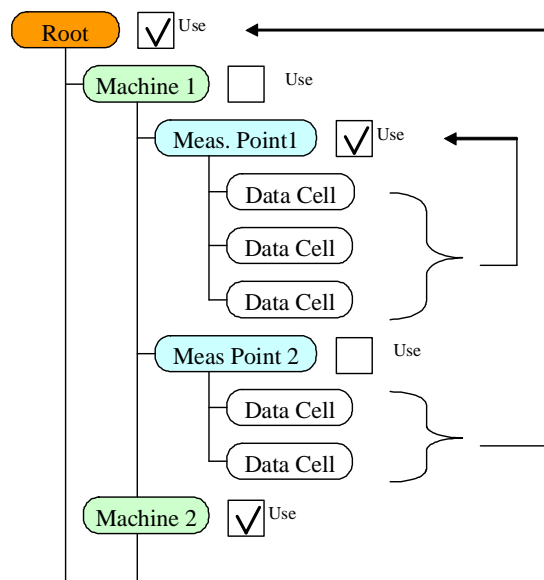
### Sensors

DDS2011 allows defining sensor on three levels. Highest level is the tree root, followed by machine and measurement point (machine is a tree item with flag "machine" and measurement point is a tree item with flag "measurement point"). VA4Pro allows to define following sensors:

- ACC acceleration
- VEL velocity
- DISP displacement
- DC

!! other sensors are not supported !!

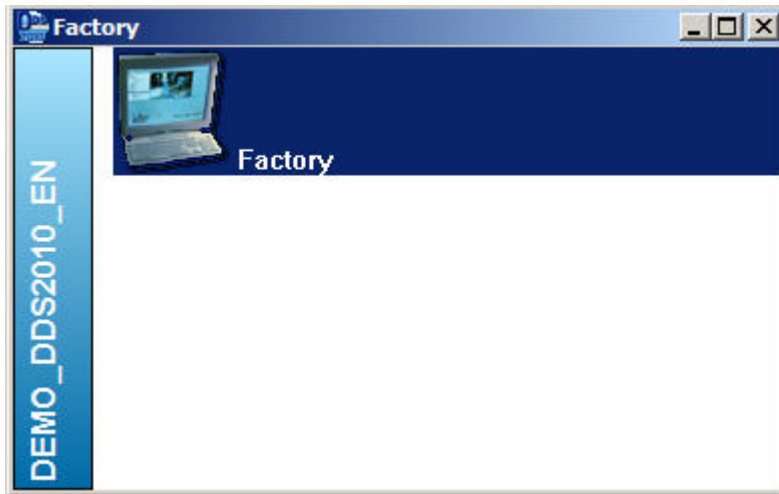
Sensor is defined only when next to the button "Sensor definition" is checked checkbox "Use". Then all data cells below this tree item are using this sensor. In one branch can be defined more then one sensor – in that case is always used the closest sensor. It is the same system of inheritance that DDS uses for information about speed or bearings.



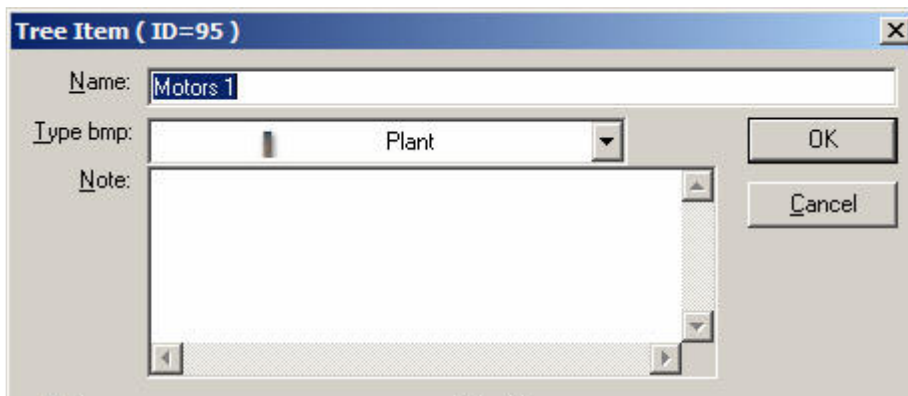
Example of sensor definition

**Example**

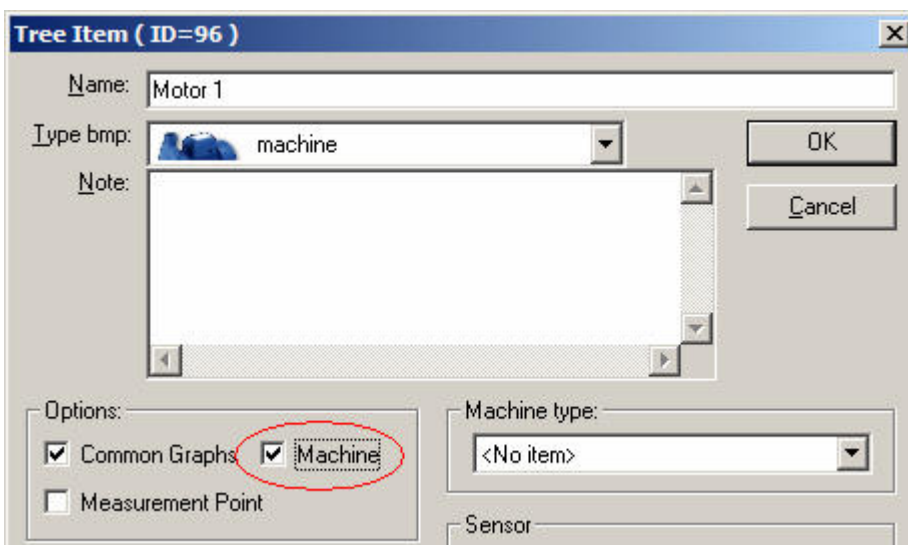
1/ In DDS (Tree/Open Tree/New) create new tree „Factory”



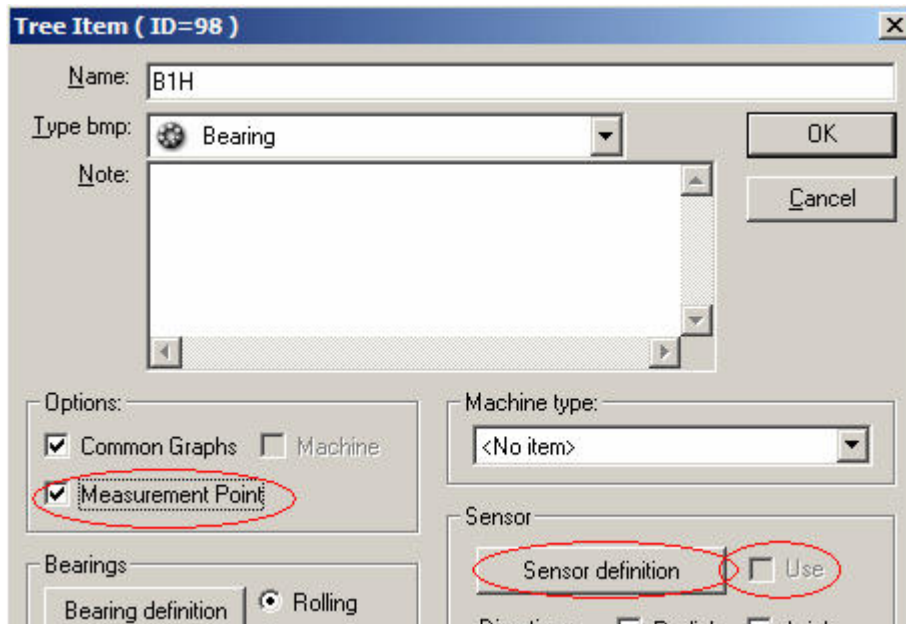
2/ Right click on “Factory” and “Add Item”. Enter name “Motors 1” and press OK.



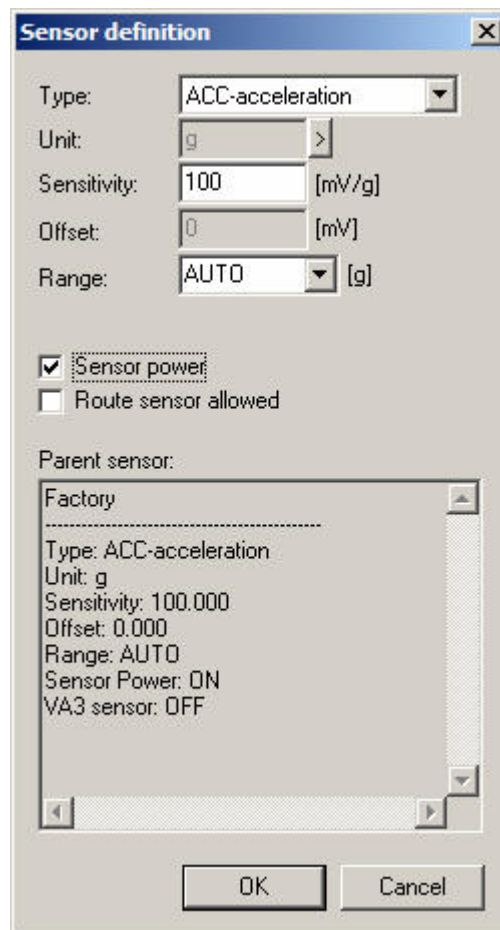
3/ Add item “Motor 1” and check “Machine”.



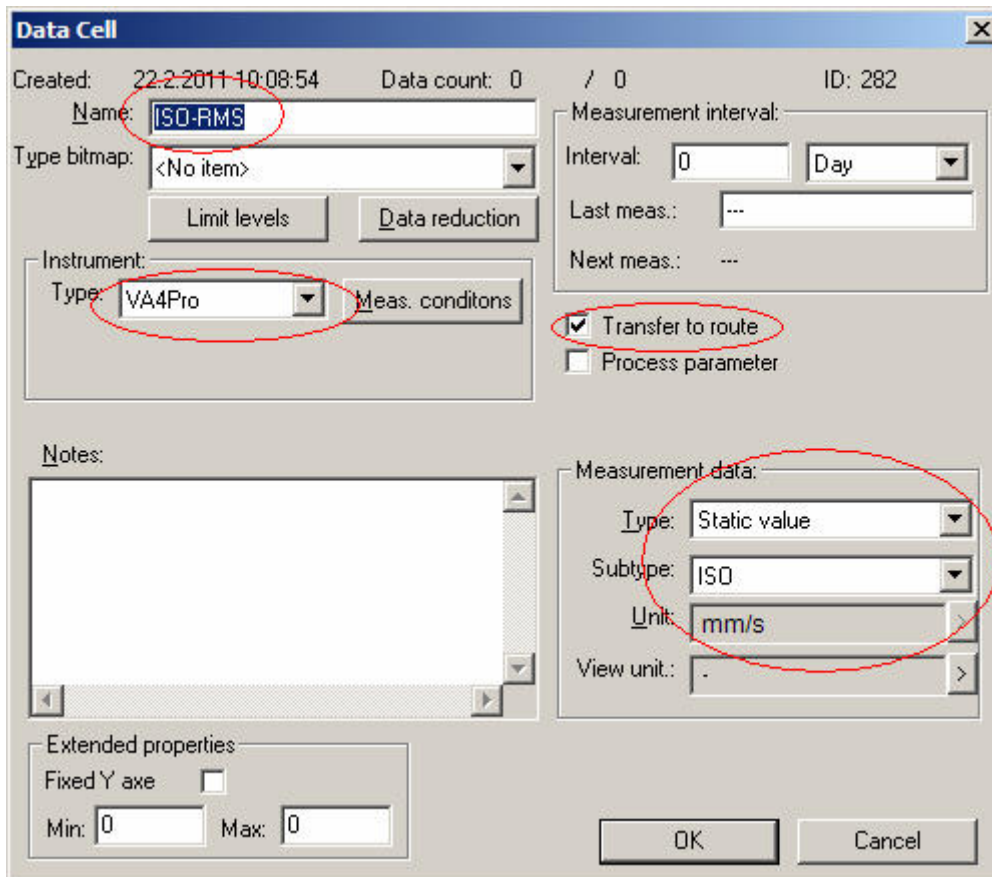
4/ Next item will be representing the bearing. Name it as "B1H" (like Bearing 1 Horizontal) and check the box "Measurement Point". In this tree item define the sensor by pressing the "Sensor definition".



Define the acc sensor with sensitivity 100 mV/g and check "Use" button (will be accessible after definition).

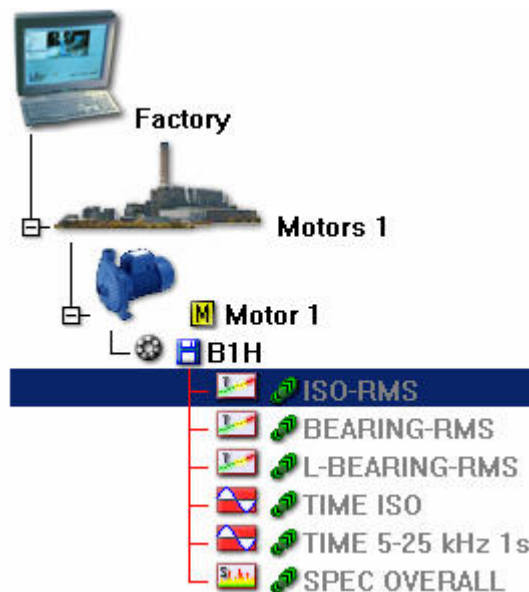


5/ Into this measurement point add new data cells. Right-click on “B1H” and “Add data cell”. Enter the data cell name “ISO RMS”, select appropriate instrument (VA4Pro), Measurement data Type(Static value) and subtype. Ensure that “Transfer to route” is checked.



Example of static data cell

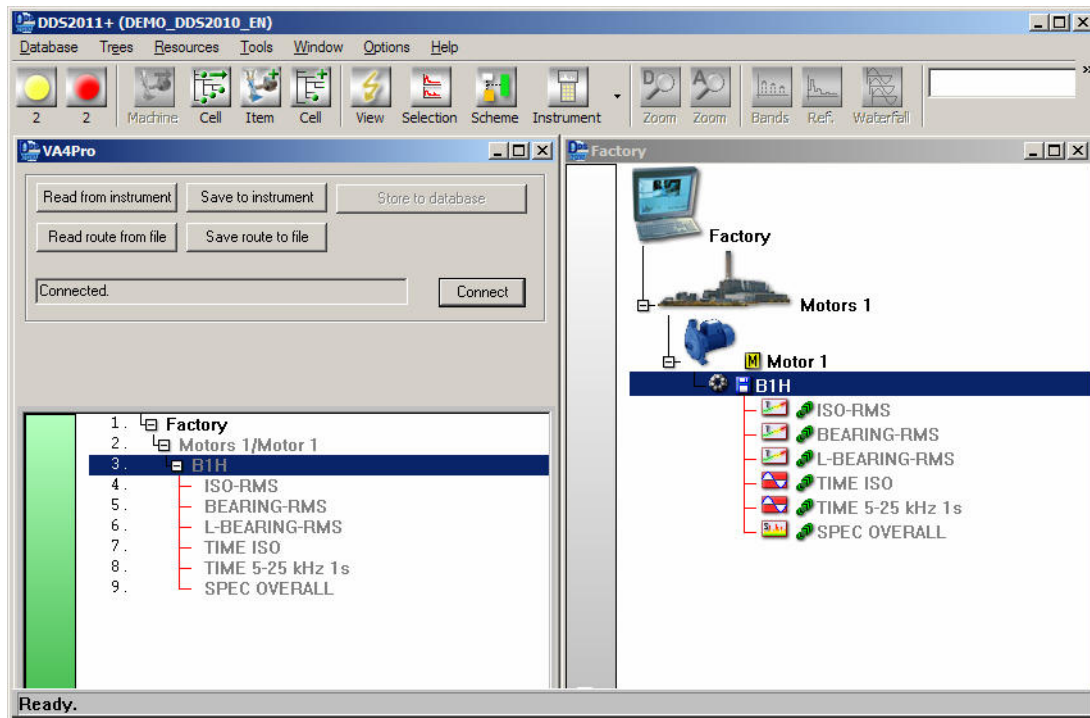
6/ Insert the rest of data cells you need. Try to experiment with other data types and subtypes.



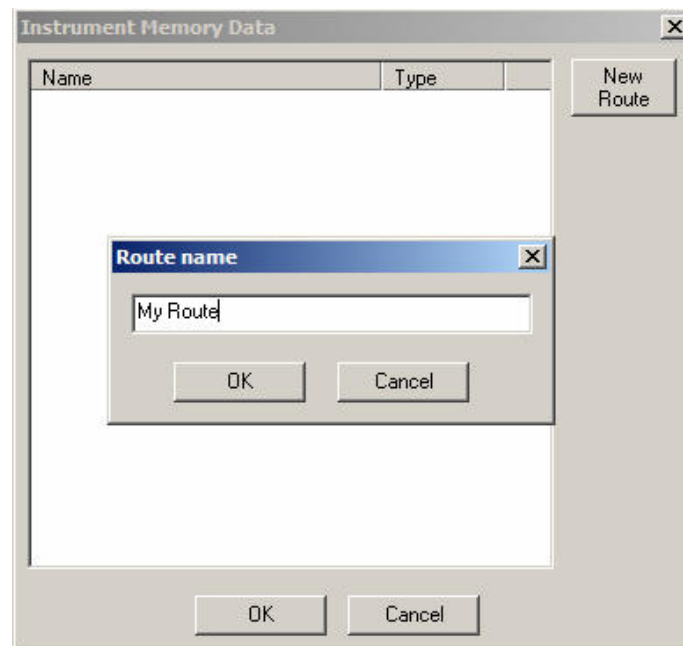
Example of route tree

## Save route to VA4Pro

Open the VA4Pro instrument dialog (**Tools / Connect Instrument / VA4Pro**). Press “Connect” and connect the VA4Pro via USB. In database window grab the tree (e.g. B1H), drag and drop it in the communication window of VA4Pro.



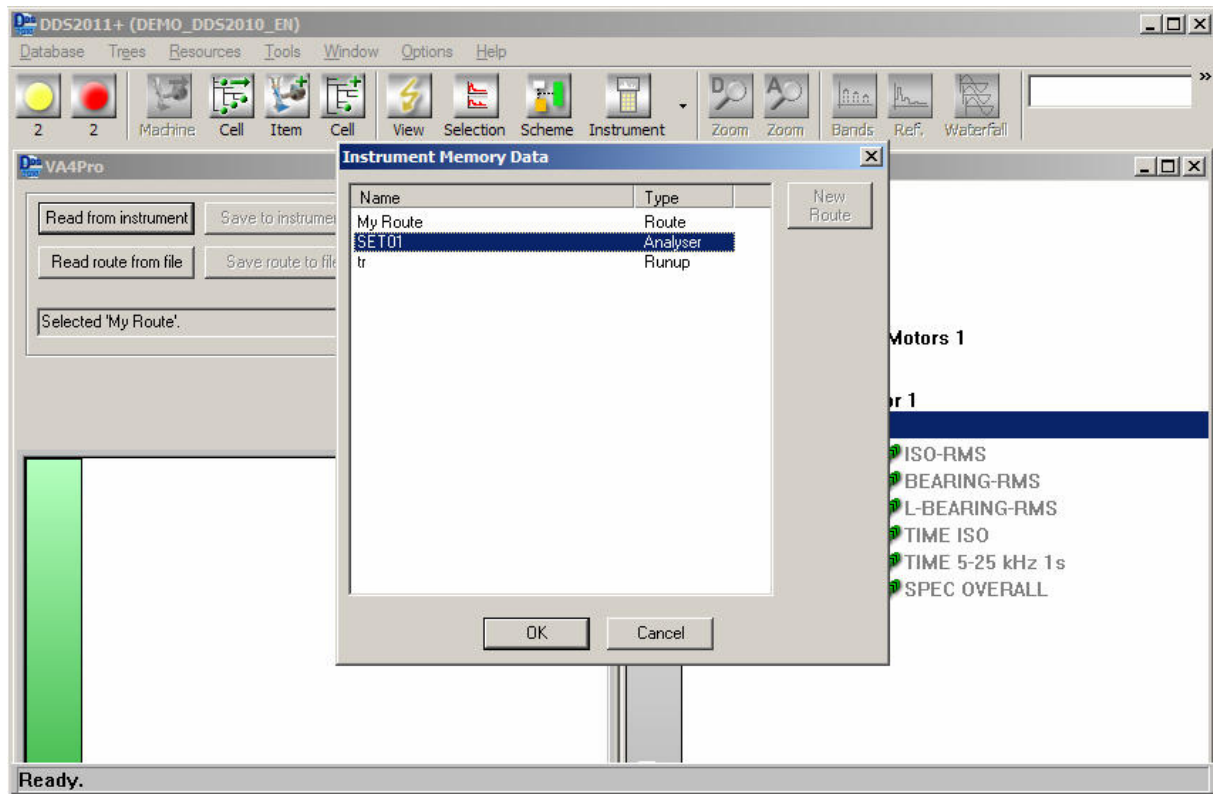
Press “Save to instrument”. The following dialog appears. Press new Route and enter route name.



Press Ok. Now new route is in the instrument. Disconnect the VA4Pro (USB).

## Storing data to database

Open the VA4Pro instrument dialog (**Tools / Connect Instrument / VA4Pro**). Press “Connect” and connect the VA4Pro via USB. Press “Read from instrument” select what you need to store into database and press OK. If you selected route and DDS find any data in VA4Pro it will enable “Store to database” button. When you press it DDS will transfer measured data into original data cells. Other way is to use drag and drop -> you can grab data from instrument window and move them into database.



## Measuring conditions

\* - these parameters cannot be changed

### Static data

Type	Unit	BPF min	BPF max	Samples*	Length*
ISO	mm/s	10	1000	1600	1s
BEARING	g	5000	25600	65536	1s
L-BEARING	g	500	25600	65536	1s
SPEED	RPM/Hz*	---	---	----	----

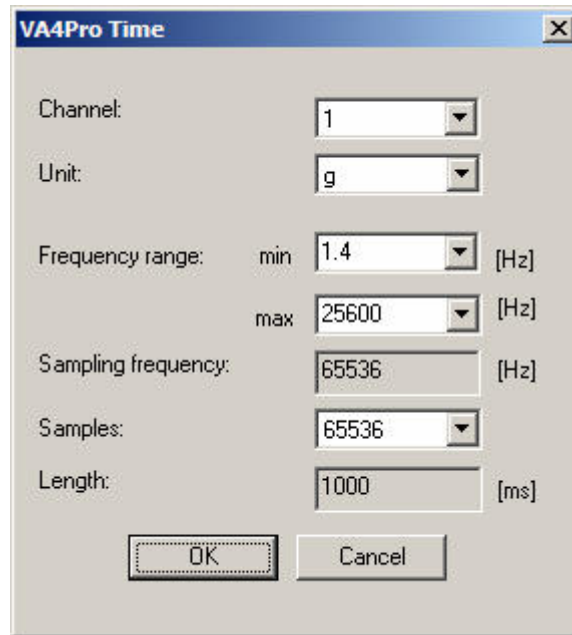
The screenshot shows the 'VA4Pro Static' dialog box with the following settings:

- Channel: 1
- Unit: g
- Envelope frequency band:
- Frequency range: min 1.4 [Hz], max 25600 [Hz]
- Sampling frequency: 65536 [Hz]
- Evaluation method: RMS
- Samples: 65536
- Averages: OFF
- Length: 1000 [ms]

Buttons: OK, Cancel

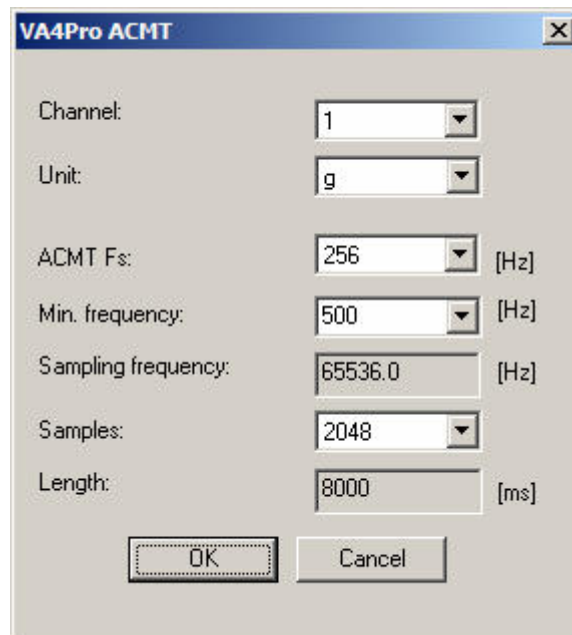
### Time waveform

Type	Unit	BPF min	BPF max	Samples*	Length*
ISO	mm/s	10	1000	1600	1s
BEARING	g	5000	25600	65536	1s
L-BEARING	g	500	25600	65536	1s



**Time waveform – ACMT**

Type	Unit*	BPF min	ACMT-FS	Samples	Length
ACMT	g	500	256 Hz	2048	8s



**Spectrum**

Type	Unit*	BPF min	BPF max	Lines*	Averages*	Overlap*	Time*
ISO	mm/s	10	1600	1600	1	0	1s

**VA4Pro Spectrum**

Channel: 1

Unit: g

Lines: 25600

FFT Window: HANNING

Averages: OFF

Overlap: 0

Range: max 25600 [Hz]

DC filter: 1.365 [Hz]

Envelope frequency band

fmin (>=100) [Hz]

fmax (<=25600) [Hz]

Sampling frequency: 65536.000 [Hz]

Length: 1000.000 [ms]

OK Cancel

### Order analysis

**VA4Pro Order analysis**

Channel: 1

Unit: g

Evaluation method: RMS

Maximum speed: StandardSpeed(max 60Hz/36)

Orders: 10

Calculate order 1/2 ?

Averages: OFF

OK Cancel

**APS**

