

**CUSTOMER**

Name: EXAMPLE  
Address: Benedenberg 100a  
Zip code & City : 2800AS Gouda  
Country: Netherlands

**CALIBRATION OF**

Device: AUROVIBE  
Brand & type: AUROVIBE  
Serial number: 20060007  
Customers Instrument tag: AV-99

**SPECIFICATIONS**

Calibrated in accordance: ISO-16063-21  
Method used: Back to Back Calibration, direct comparison to reference standard  
accelerometer as specified in ISO-16063-21  
Traceability: DANAK CDK1602396

**CALIBRATION  
CONDITIONS**

Preconditioning: 4 hours at 23 [°C] ± 3 [°C]  
Environmental conditions: Pressure Unit Humidity Unit Temperature Unit  
1011,4 [hPa] 52,0 [%] 21,6 [°C]

**UNCERTAINTY  
OF  
MEASUREMENT**

The reported expanded uncertainty is based on a standard uncertainty multiplied by a coverage factor  $k = 2$ , which for a normal distribution provides a level of confidence of approximately 95%. The uncertainty in evaluation has been carried out in accordance with EA-4/02 from elements originating from standards, calibration methods, effect of environmental conditions and any short time contribution from the device under calibration.

**RESULT** **PASS**

**DATE** Date of calibration : Date of issue :  
Calibration Engineer: Approved Signatory:  
A.Vreeswijk 12-2-2018 12-2-2018

**VISUAL INSPECTION**

Yes No

The equipment / device is in serviceable condition.	x	
There is no visible damage.	x	
The appropriate documentation accompanied the equipment.	x	
Calibration tags / CE tags are present and correct.	x	
The equipment is suitable to use for official testing and/or calibration.	x	

**COMMENTS**

The FFT analyzer submitted for testing has successfully completed the periodic tests for the environmental conditions under which the tests were performed.  
 Pass for frequencies below 125 Hz  
 Filters implemented in device under test are SBR-A:  
 Filters : 80-100 Hz  $-1,2 \leq \Delta \leq +2,3$  dB; 100-125 Hz  $\Delta \geq -1,2$  dB;  $\geq 125$  Hz  $\Delta \geq -12$  dB/octaaf

In the calibration measurements the peak velocity of the DUT is compared to the peak averaged velocity values from the acceleration reference sensor, after integration of the measured signal.

**CALIBRATION EQUIPMENT**

Device	Type	Brand	Serialno.
Digital Voltmeter 6½ digits	34465A	Keysight	MY54502281
Ultra low distortion generator	DS360	Stanford RS	33264
Conditioning Amplifier	Nexus 2692	Bruel & Kjaer	2079137
Laboratory Standard Accelerometer	8305	Bruel & Kjaer	C127545
Puls Multi Analyzer	3560C	Bruel & Kjaer	2341819
Power Amplifier	2712	Bruel & Kjaer	2005145
Vibration Exiter	4808	Bruel & Kjaer	2014225

**EXPANDED UNCERTAINTY OF MEASUREMENTS**

Frequency f [Hz]	Expanded Uncertainty, U, Rounded to 2 Significant Digits. Charge Transmission Reference.
3 - 8 Hz	1,3%
10-2000 Hz	1,1%
2500 - 4000 Hz	1,9%
5000 - 8000 Hz	2,6%
10000 Hz	3,4%

Thermal effects have been incorporated in the uncertainties

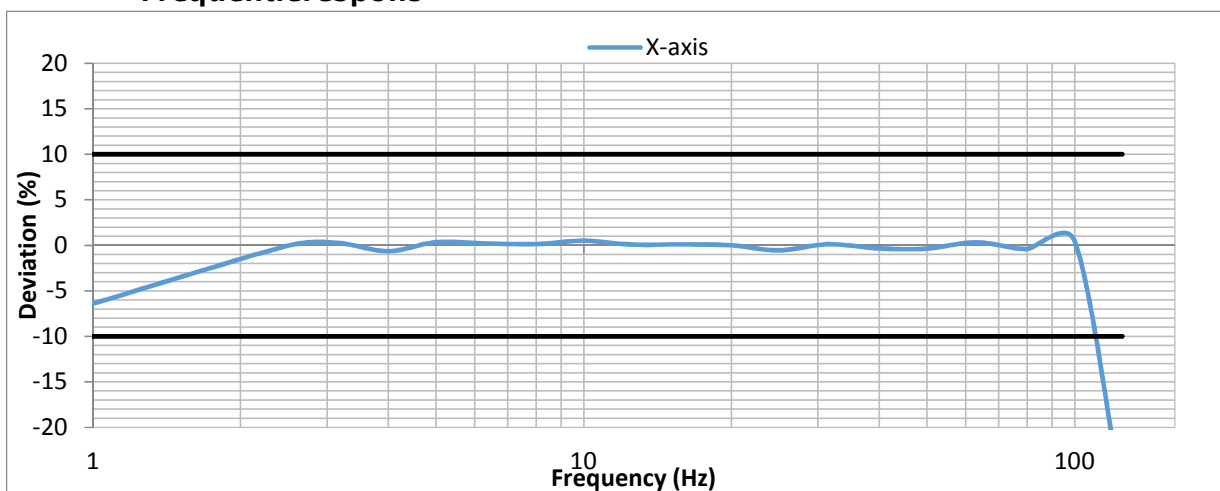
**MEASUREMENTS**

	Brand	Type	Serial no.	Sensitivity	Unit	Ref. frequency	Fixture
<b>X-AXIS</b>	Aurovibe	SBR	20060007	n/a	mms -1	16	Stud + Oil

**MEASUREMENTS CONDITIONS**

Gravitational Field NL	9,80665	ms-2
Excitation Angle	0	Degree
Excitation	Sinusoidal	
Connexion Cable	USB	Customer cable

**Frequentierespons**



**Sensitivity measured relative to reference axis measurement at 16 Hz**

f [Hz]	Dev [%]	Dev [dB]
1	-6,41	-4,21
2,5	-0,04	-0,01
3,15	0,27	0,05
4	-0,64	-0,09
5	0,34	0,04
6,3	0,21	0,02
8	0,14	0,01
10	0,51	0,01
12,5	0,09	0,01
16	0,11	0,00
20	0,00	-0,05
25	-0,55	0,01
31,5	0,12	-0,03
40	-0,34	-0,04
50	-0,36	0,04
63,00	0,33	-0,07
80	-0,40	0,10
100	0,45	0,00
125	-27,62	0,00

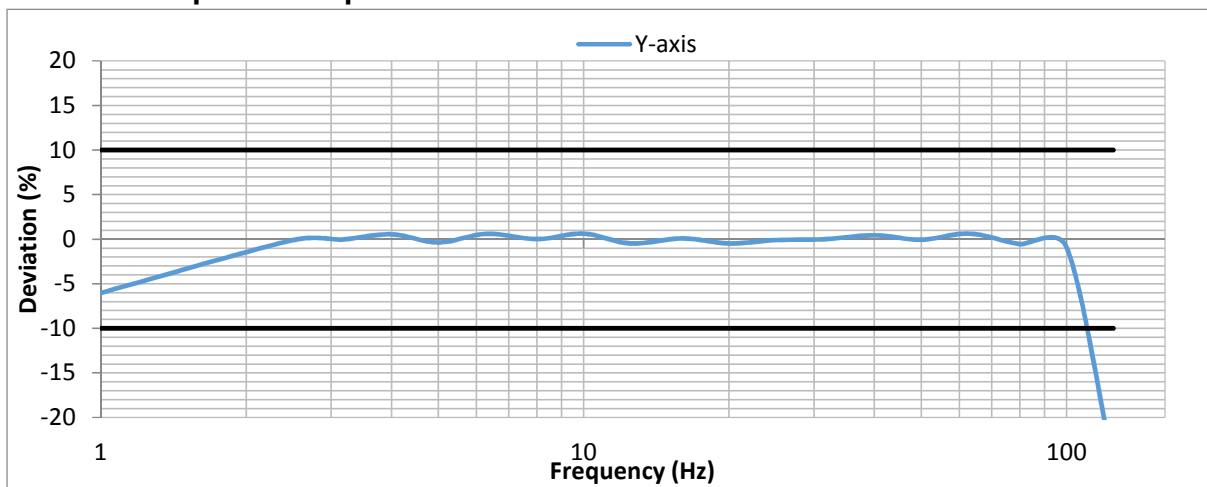
**MEASUREMENTS**

	Brand	Type	Serial no.	Sensitivity	Unit	Ref. frequency	Fixture
<b>Y-AXIS</b>	Aurovibe	SBR	20060007	n/a	mms -1	16	Stud + Oil

**MEASUREMENTS CONDITIONS**

Gravitational Field NL	9,80665	ms-2
Excitation Angle	0	Degree
Excitation	Sinusoidal	
Connexion Cable	USB	Customer cable

**Frequentierespons**



**Sensitivity measured relative to reference axis measurement at 16 Hz**

f [Hz]	Dev [%]	Dev [dB]
1	-6,03	-4,39
2,5	-0,11	-0,02
3,15	-0,04	-0,01
4	0,55	0,08
5	-0,37	-0,05
6,3	0,60	0,07
8	0,01	0,00
10	0,62	0,06
12,5	-0,48	-0,04
16	0,09	0,01
20	-0,48	-0,04
25	-0,10	-0,01
31,5	0,00	0,00
40	0,44	0,04
50	-0,05	-0,01
63,00	0,62	0,08
80	-0,55	-0,10
100	-0,92	-0,21
125	-25,32	-27,61

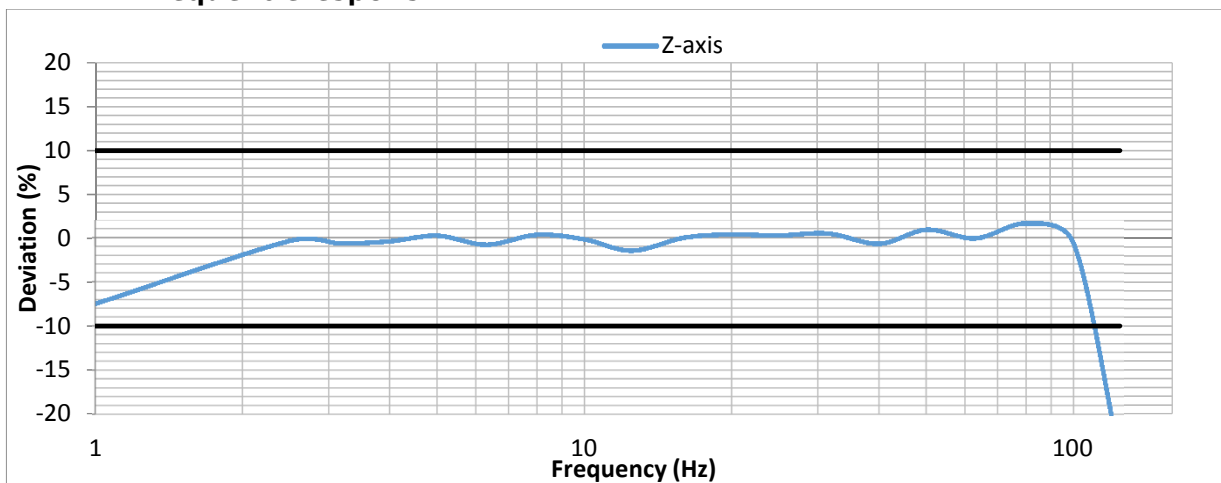
**MEASUREMENTS**

	Brand	Type	Serial no.	Sensitivity	Unit	Ref. frequency	Fixture
<b>Z-AXIS</b>	Aurovibe	SBR	20060007	n/a	mms -1	16	Stud + Oil

**MEASUREMENTS CONDITIONS**

Gravitational Field NL	9,80665	ms-2
Excitation Angle	0	Degree
Excitation	Sinusoidal	
Connexion Cable	USB	Customer cable

**Frequentierespons**



**Sensitivity measured relative to reference axis measurement at 16 Hz**

f [Hz]	Dev [%]	Dev [dB]
1	-7,46	-6,22
2,5	-0,32	-0,07
3,15	-0,64	-0,11
4	-0,39	-0,06
5	0,25	0,03
6,3	-0,78	-0,09
8	0,36	0,04
10	-0,18	-0,02
12,5	-1,46	-0,13
16	0,04	0,00
20	0,38	0,03
25	0,27	0,02
31,5	0,49	0,04
40	-0,68	-0,07
50	0,93	0,10
63,00	-0,06	-0,01
80	1,64	0,29
100	-0,64	-0,15
125	-25,60	-27,95