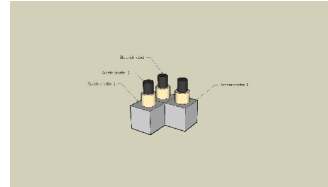


Minus10dB has developed a method to measure 6 Degrees of Freedom (M10 6DOF) in a single position on a structure. The technique consists of a combination of accelerometers and Matlab software to calculate the responses.

M10 6DOF measurement makes it possible to:

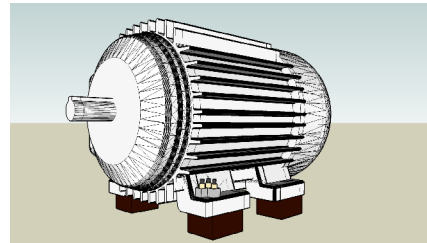
- Measure acceleration in three directions
- Measure rotation about three orthogonal axes
- Animate the motion of the transducer



The transducer is a combination of two triaxial and one monoaxial accelerometers, all together 6 channels are used for the measurement. By means of a 7th channel a reference is established. This can be used as a phase reference for animation, or as a force reference for the measurement of transfer mobilities of the structure.

The applications for M10 6DOF measurements are:

- Rigid body measurements for evaluation of vibration isolation
 - Global vibration at lower frequencies
- Detection of dominating degrees of freedom in flexible structures
 - Local vibration of the beam structure
- Mobility measurement in 6 DOF



Advantages of M10 6DOF measurements:

- Avoids missing a dominating degree of freedom
- Faster results analyzing structures
- Less measurement positions for complete analyses of structures

Specifications:

- Accelerometers applied type Brüel & Kjær 4524B, 4508B
- Dimensions 20 mm x 20 mm x 10 mm
- Recommended mounting dimension: 20 mm x 20 mm
- Weight: < 15 gram
- Frequency range as accelerometers: estimated 0,2 – 3000 Hz
- Hardware and software implementation:
 - Brüel & Kjær Pulse 7 channel using PL language for parts of calculations
 - Matlab application M10 6DOF measurement