



Digital Acceleration Decoder D-AD-2

Ultrafast FPGA-based Digital Signal Processing

Optomet Vibrometers feature an end-to-end FPGA-based digital signal processing allowing a fully digital read-out of the measurement data. Digital signal processing avoids any drawbacks of analog demodulation which may result from component aging, temperature dependencies, noise and non-linearities. Significantly higher sensitivity, better resolution, and stability are the benefits of OptoMET's end-to-end digital signal processing. Extremely low noise levels produce precise results even from poorly reflecting measurement objects.



HIGHLIGHTS:

- Digital decoder
- 11 acceleration measuring ranges
- Frequency range: 0 Hz - 1 MHz
- Max. acceleration 1,280,000 g
- Best acceleration resolution
1.8 $\mu\text{g} / \sqrt{\text{Hz}}$ *

High-Precision Sense Acceleration Decoder

All vibrometers series feature by default a velocity decoder and can be supplemented with a suitable displacement and/or acceleration decoder.

The D-AD-2 acceleration decoder enables acceleration measurements up to 1,280,000 g at a maximum of 1 MHz and 2 m/s.

Required velocity decoder: D-VD-2

* The resolution is defined as the signal amplitude (rms) that produces 0 dB signal/noise ratio with 1 Hz spectral resolution at 50 % fmax.

Technical data

Pos.	Full Scale Output (Peak) g	Max. Frequency kHz	Max. Velocity m/s
1	1.6	2.5	2
2	6.4	5	2
3	32	10	2
4	160	25	2
5	640	50	2
6	3,200	100	2
7	16,000	250	2
8	64,000	500	2
9	320,000	1,000	2
10	640,000	1,000	2
11	1,280,000	1,000	2