



Digital Acceleration Decoder D-AD-2N-12

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
- 12 acceleration measuring ranges
- Frequency range: 0 Hz - 1 MHz
- Max. acceleration 7,600,000 g
- Best acceleration resolution
1.8 $\mu\text{g} / \sqrt{\text{Hz}}$ *

High-Precision Sense Speed 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-2N-12 acceleration decoder enables acceleration measurements up to 7,600,000 g at a maximum of 1 MHz and 12 m/s.

Required velocity decoder: D-VD-2N-12

* 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	3.9	2.5	12
2	15.6	5	12
3	78	10	12
4	392	25	12
5	1,560	50	12
6	7,800	100	12
7	39,200	250	12
8	156,000	500	12
9	784,000	1,000	12
10	1,560,000	1,000	12
11	3,100,000	1,000	12
12	7,600,000	1,000	12