



## Digital Acceleration Decoder D-AD-0N

### 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
- 7 acceleration measuring ranges
- Frequency range: 0 Hz - 100 kHz
- Max. acceleration 160,000 g
- Best acceleration resolution\*  
90  $\mu\text{g} / \sqrt{\text{Hz}}$

#### Start 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-0N acceleration decoder allows acceleration measurements up to 160,000 g at a maximum of 100 kHz and 2.5 m/s.

Required velocity decoder: D-VD-0N

\* 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

<b>Pos.</b>	<b>Full Scale Output (Peak)</b> <b>g</b>	<b>Max. Frequency</b> <b>kHz</b>	<b>Max. Velocity</b> <b>m/s</b>
1	392	25	2.5
2	1,560	50	2.5
3	7,800	100	2.5
4	15,600	100	2.5
5	31,300	100	2.5
6	78,400	100	2.5
7	160,000	100	2.5