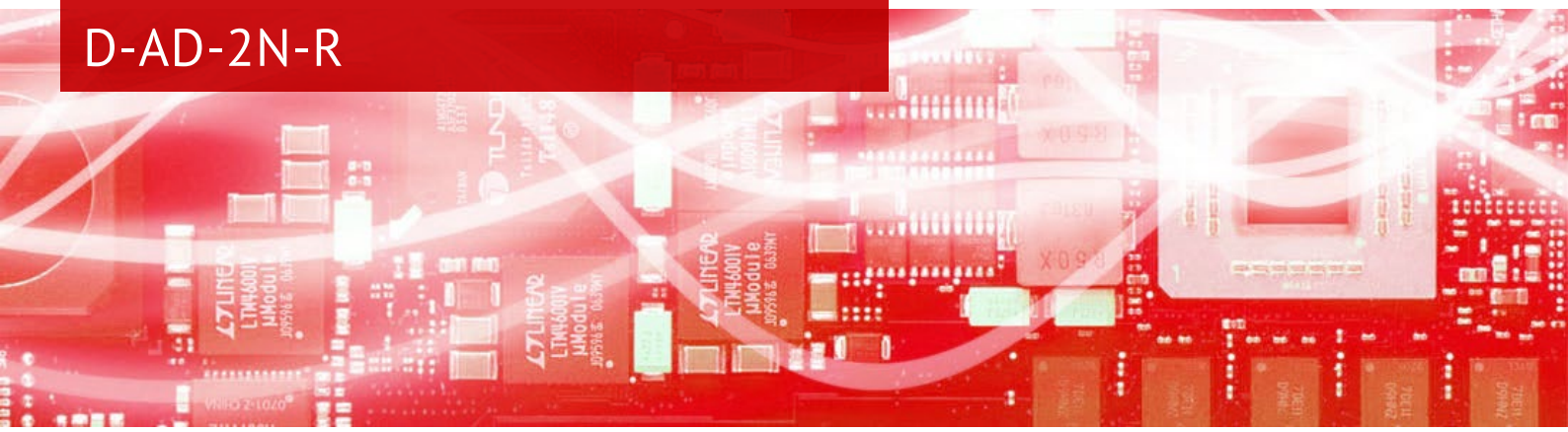
optomet.
LASER VIBROMETRY

Digital Acceleration Decoder
D-AD-2N-R



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 - 25 kHz
- Max. acceleration 80,000 g
- Best acceleration resolution 1.8 µg / √Hz*

Remote 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-2N-R acceleration decoder enables acceleration measurements up to 80,000 g at a maximum of 25 kHz and 5 m/s.
Required velocity decoder: D-VD-2N-R

* 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	5
2	15.6	5	5
3	78	10	5
4	392	25	5
5	784	25	5
6	1,960	25	5
7	3,920	25	5
8	7,840	25	5
9	19,600	25	5
10	39,200	25	5
11	80,000	25	5