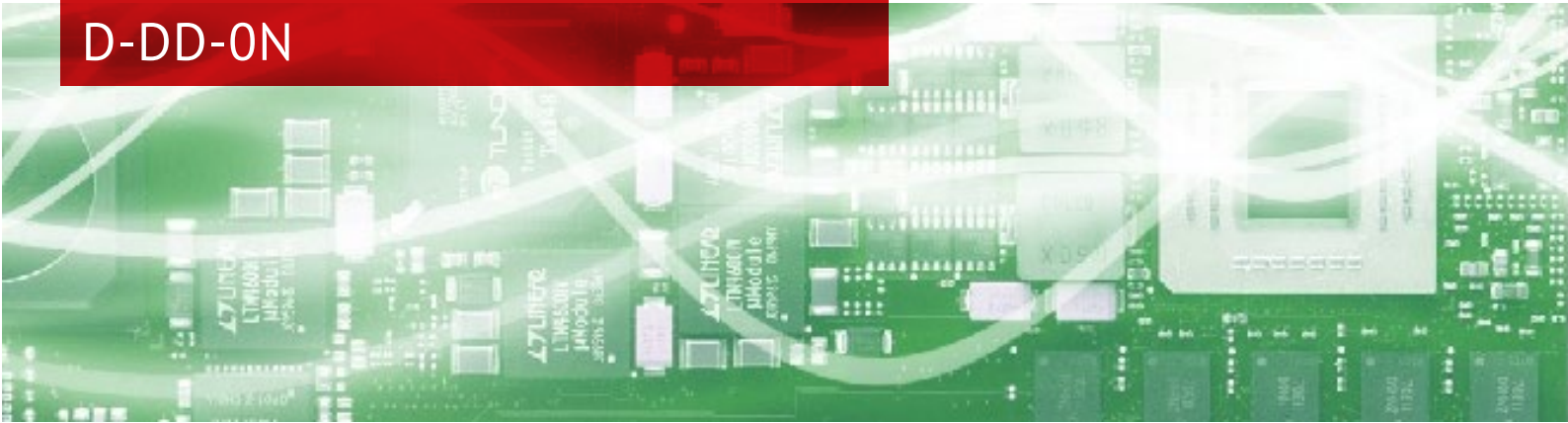




Digital Displacement Decoder D-DD-0N



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
- 19 displacement measuring ranges
- Frequency range: DC bis 100 kHz
- Max. velocity up to 2.5 m/s
- Resolution* down to 50 femtometers



Start Displacement Decoder

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

The D-DD-0N displacement decoder is a versatile solution for various applications in noncontact vibration measurement. It features 19 displacement measuring ranges and can measure up to 100 kHz with a maximum velocity of the measured object of 2.5 m/s. Digital signal processing provides excellent linearity and measuring accuracy.

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

Pos.	Full Scale Output peak to peak	Signal Frequency Range	Max. Velocity
	μm	kHz	m/s
1	0.245	0 ... 100	2.5
2	0.49	0 ... 100	2.5
3	0.98	0 ... 100	2.5
4	2.45	0 ... 100	2.5
5	4.9	0 ... 100	2.5
6	9.8	0 ... 100	2.5
7	24.5	0 ... 100	2.5
8	49	0 ... 100	2.5
9	98	0 ... 100	2.5
10	245	0 ... 100	2.5
11	490	0 ... 100	2.5
12	980	0 ... 100	2.5
13	2,450	0 ... 100	2.5
14	4,900	0 ... 100	2.5
15	9,800	0 ... 100	2.5
16	24,500	0 ... 100	2.5
17	49,000	0 ... 100	2.5
18	98,000	0 ... 100	2.5
19	245,000	0 ... 100	2.5

