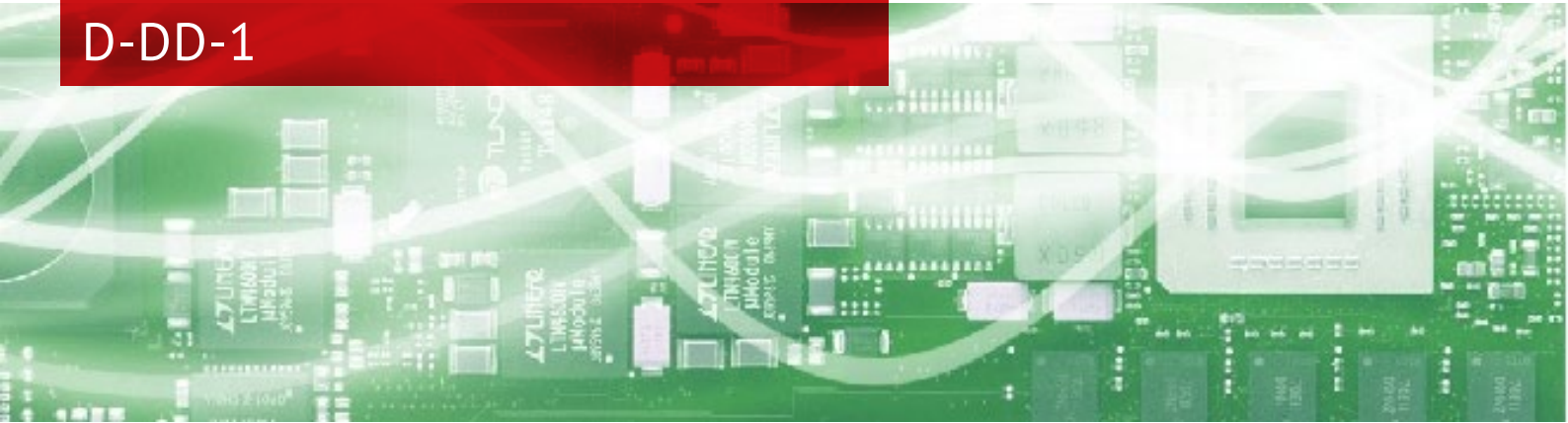




Digital Displacement Decoder

D-DD-1



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.

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HIGHLIGHTS:

- Digital decoder
- 19 displacement measuring ranges
- Frequency range: DC bis 500 kHz
- Max. velocity up to 2 m/s
- Resolution down to 50 femtometers

Universal Basis 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-1 displacement decoder is a versatile solution for various applications in noncontact vibration measurement. It features 19 displacement measuring ranges and can measure up to 500 kHz with a maximum velocity of the measured object of 2 m/s. Digital signal processing provides excellent linearity and measuring accuracy.
Required velocity decoder: D-VD-1

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Technical data

Pos.	Full Scale Output (Peak to peak)	Signal Frequency Range	Max. Velocity
	µm	kHz	m/s
1	0.1	0 ... 500	2
2	0.2	0 ... 500	2
3	0.4	0 ... 500	2
4	1	0 ... 500	2
5	2	0 ... 500	2
6	4	0 ... 500	2
7	10	0 ... 500	2
8	20	0 ... 500	2
9	40	0 ... 500	2
10	100	0 ... 500	2
11	200	0 ... 500	2
12	400	0 ... 500	2
13	1,000	0 ... 500	2
14	2,000	0 ... 500	2
15	4,000	0 ... 500	2
16	10,000	0 ... 500	2
17	20,000	0 ... 500	2
18	40,000	0 ... 500	2
19	100,000	0 ... 500	2

Range diagram

