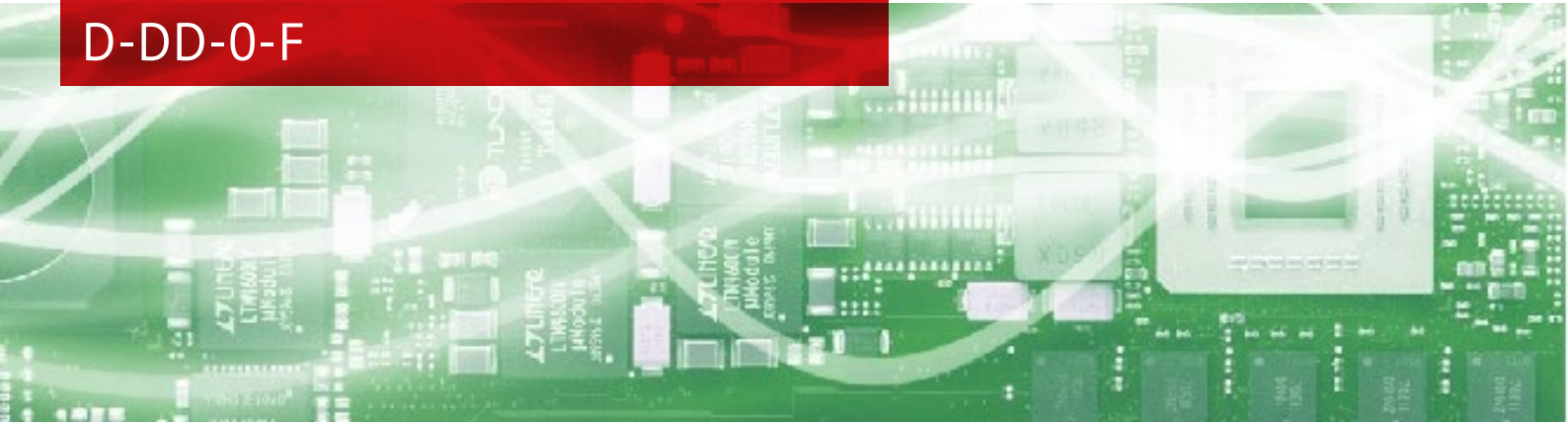




## Digital Displacement Decoder D-DD-0-F



### 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 100 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-0-F 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 1 m/s. Digital signal processing provides excellent linearity and measuring accuracy.

Required velocity decoder: D-VD-0-F

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# Technical data

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

**Range diagram**

