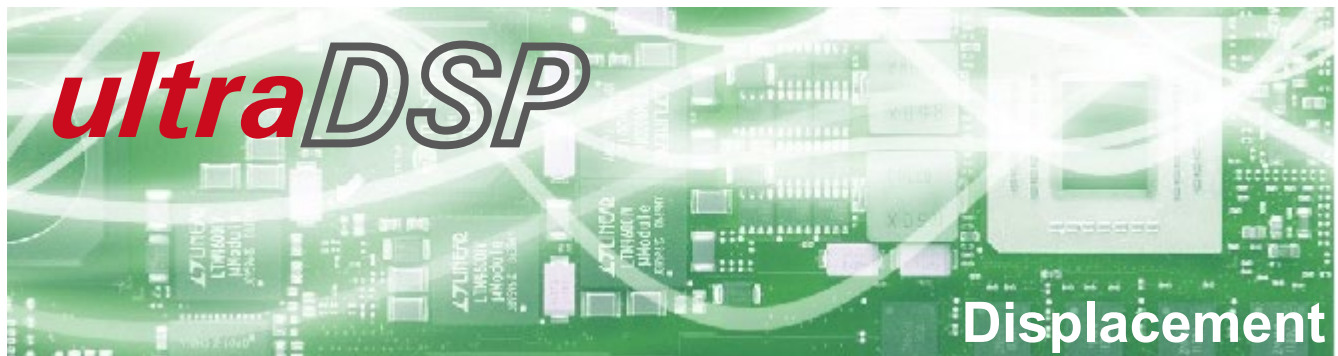


Digital Displacement Decoder D-DD-5



ultraDSP Technology - Ultrafast digital signal processing (ultraDSP)

OptoMET offer a complete line of vibrometer digital decoders. Compared to their analog counterparts, digital decoders offer much better precision, resolution, aging resistance, and sensitivity. The user can thus measure vibrations / dynamic motion (even very small amplitudes) with high precision. Practical applications also benefit from the excellent low-noise digital signal processing that allows measurements on nearly all types of surfaces and from a large distance.

OptoMET has implemented its ultrafast digital signal processing technology (ultraDSP), which combines efficient algorithms with extremely powerful hardware, to achieve exceptional velocity resolution, high frequency bandwidths and extremely large dynamic range of up to 9 decades for velocity measurements (nm/s - m/s).

Displacement Decoder

OptoMET offers a range of digital decoder options that can be used to upgrade or expand all models of the Vector Series so that you can tailor them to your measuring requirements.

Each vibrometer of the Vector Series can also be equipped with a displacement decoder in addition to the velocity decoder already installed. These decoders provide an excellent displacement resolution of down to 50 femtometers and, depending on the performance class, a working frequency range up to 10 MHz, and a maximum velocity of 10 m/s.

D-DD-5 Features:

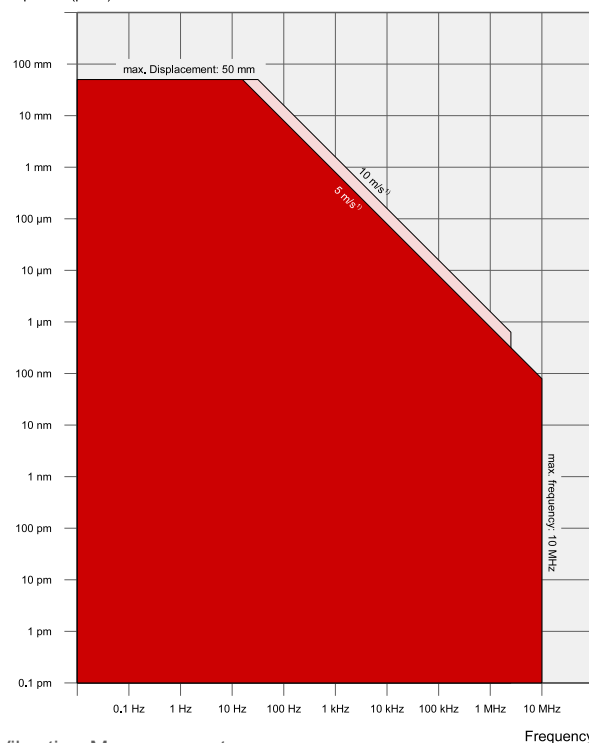
- Digital Decoder
- 19 displacement measuring ranges
- Frequency range DC bis 10 MHz
- Max. vibration velocity 10 m/s
- Resolution down to 50 femtometers

Technical data

The D-DD-5 decoder provides the highest performance of all displacement decoders. With its dynamic range from 50 fm to 100 mm, a bandwidth of 10 MHz, and a maximum permissible acceleration of 32,000,000 g, it is the ideal tool for challenging applications in research and development. This decoder has been specially developed for use with a D-VD-5 velocity decoder.

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

Amplitude (peak)



¹⁾ Velocity limit is determined by the selected measurement range of the velocity decoder.