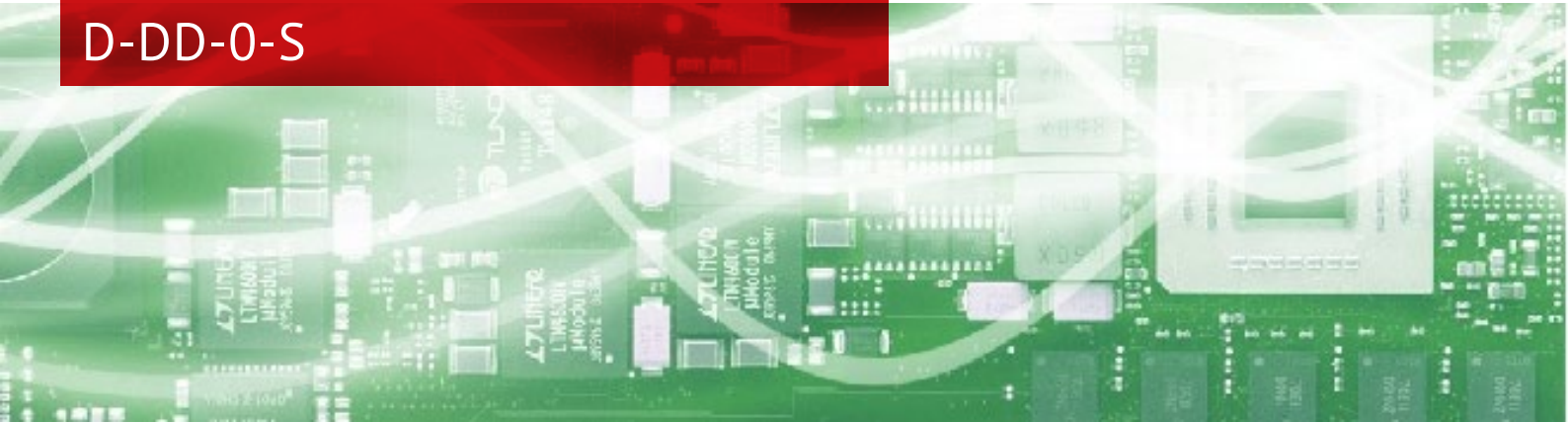




Digital Displacement Decoder D-DD-0-S



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 25 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-S displacement decoder is a versatile solution for various applications in noncontact vibration measurement. It features 19 displacement measuring ranges and can measure up to 25 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-S

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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 ... 25 | 2 |
| 2 | 0.2 | 0 ... 25 | 2 |
| 3 | 0.4 | 0 ... 25 | 2 |
| 4 | 1 | 0 ... 25 | 2 |
| 5 | 2 | 0 ... 25 | 2 |
| 6 | 4 | 0 ... 25 | 2 |
| 7 | 10 | 0 ... 25 | 2 |
| 8 | 20 | 0 ... 25 | 2 |
| 9 | 40 | 0 ... 25 | 2 |
| 10 | 100 | 0 ... 25 | 2 |
| 11 | 200 | 0 ... 25 | 2 |
| 12 | 400 | 0 ... 25 | 2 |
| 13 | 1,000 | 0 ... 25 | 2 |
| 14 | 2,000 | 0 ... 25 | 2 |
| 15 | 4,000 | 0 ... 25 | 2 |
| 16 | 10,000 | 0 ... 25 | 2 |
| 17 | 20,000 | 0 ... 25 | 2 |
| 18 | 40,000 | 0 ... 25 | 2 |
| 19 | 100,000 | 0 ... 25 | 2 |

