

Model - Series HD-T	VLX
<ul style="list-style-type: none"> <li>Frequency and envelope spectra available online</li> <li>Signal and characteristic value recording RAM/SD card</li> </ul>	✓
<ul style="list-style-type: none"> <li>Measured values via analog standard signals</li> <li>Alarms via digital outputs</li> </ul>	✓
<ul style="list-style-type: none"> <li>Measurements and alarms available online</li> <li>HTTP-API, streaming sensor signals (Windows / Linux)</li> </ul>	✓
<ul style="list-style-type: none"> <li>Additional options available: DataStream, MultiMode, DataInspect</li> </ul>	✓

## Transformation of time signals

The **VLX HD-T** series enables the **transformation** of measured vibration signals from the **time domain** to the **frequency domain**. This opens up new possibilities for targeted monitoring of individual frequencies. Typical vibration problems can be reliably identified via the excitation and natural frequencies of the machine. Rolling bearing-dependent rollover frequencies in the event of damage to the raceways and rolling elements, or resonance behavior during machine start-up and shutdown, can be reliably detected in this way, independently of the rest of the overall vibrations of a machine.

The **real-time transformation** of the time signals into **frequency or envelope spectra** takes place directly in the VLX device, enabling significant data reduction. The device makes the results available for further processing at its LAN interface.

The **memory recorder** can now also be used to record **characteristic values** and **raw data** in a time- and event-controlled manner. For this purpose, the **VLX HD-T** series provides a fast 64 MB internal memory (RAM), which can be transferred to an **SD card** for further evaluation of the data if required.

The **VLX HD-T** series has a **real-time clock (RTC)** for subsequent **synchronization** of data evaluation with event-driven data recording.

## Your advantage at a glance

### Powerful monitoring

- Permanent, seamless calculation of measured values
- FFT and envelope analysis accessible via LAN
- Internal memory recorder (RAM)
- Transfer to SD card for further processing
- Real-time clock (RTC)
- Crash- and collision warning
- Monitor dynamic processes
- Standard-compliant machine protection:  
ISO 10816/20816, ISO 14694, ISO 8528-9, VDI 3832, DIN EN IEC 60034-14
- Streams data for its own monitoring rules

### Flexibility

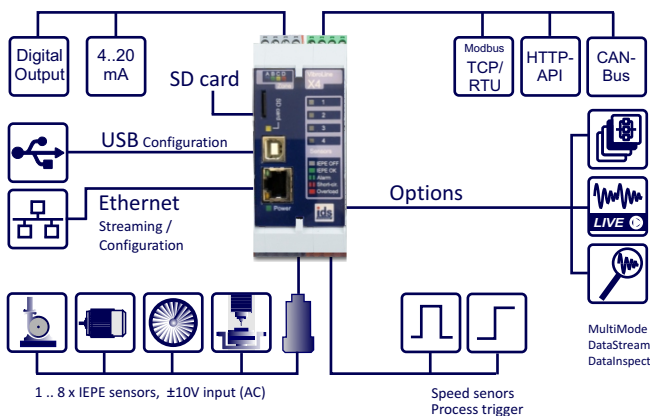
- 1, 2, 4, 6, 8 channels for variable number of measuring points
- Versatile connection via standard signals
- Freely configurable vibration characteristics
- Streaming of high-resolution sensor signals

### Product safety

- Protection against electric shock
- Protection against mechanical hazards
- Resistance to mechanical stress
- Protection against the spread of fire

### Tested according to CE:

- 2014/35/EU (Low Voltage Directive)
- 2014/30/EU (EMV Directive)
- DIN EN 61010-1:2020
- DIN EN 61326-1 VDE 0843-20-1



DB VL HDT 10/25

Technical Data		VLX HD-T 6.0
<b>Measuring inputs</b>		
Measurement range	±10 V AC, IEPE supply 6 mA switchable per channel	
Number	1, 2, 4, 6, 8	
Gains G (switchable per channel)	1, 25	
Noise (0.1 ... 40 000 Hz), RMS	< 250 µV (V1), < 15 µV (V25)	
Noise (10 ... 1 000 Hz), RMS	< 60 µV (V1), < 5 µV (V25)	
Measurement error	< 4 %	
<b>Digital trigger inputs</b>		
Number	3x input for speed trigger, 1x Prozess trigger	
Level	0 ... 24 V	
Switching threshold high-low	0.5 ... 24 V adjustable	
Maximum detected speed	180 000 rpm	
<b>Signal processing (configurable)</b>		
Sampling of sensor signals	24 Bit, 96 000 Hz	
Bandpass filter	0.1 ... 40 000 Hz	
Order filter	Integer and fractional orders	
Vibration measurands	Acceleration, velocity, displacement	
Monitored characteristic values	RMS, peak, peak-to-peak, 1/K(t), BCC	
Alarm management	2 alarms and 4 zones per channel	
Cycle time	8 ms (0.7 ms for crash detection)	
<b>Transformation</b>		
Fast Fourier Transformation	up to 262 144 Lines	
Envelope analysis with Hilbert transform		
Envelope analysis with rectification		
<b>Memory recorder (RAM)</b>		
Size	64 MB <sup>1)</sup>	
- equals to number of characteristic values	> 5 Million	
- equals to signal recording <sup>2)</sup>	170s	
Characteristic value recording types	periodically, triggered	
Characteristic recording cycles	8ms, 40ms, 200ms, 1s, 3s, 10s, 1min, 3min, 10min, 1h, 1d	
Signal recording cycles (kHz)	32, 48, 96	
internal trigger sources	limit value exceedances	
externe trigger sources	Process trigger (digital input), Modbus, HTTP-API	
Delay and hold time	0,0 ... 60,0 s (adjustable in 0.1s increments)	
<b>Storage on SD card</b>		
Supported card types	microSD, microSDHC	
File system	FAT32	
operating mode	Transferring the contents of the memory recorder	
<b>Real-time clock (RTC)</b>		
Time zone	Coordinated Universal Time (UTC)	
Synchronization	when transferring the configuration	
Buffering in case of power failure	2 Month	
<b>Digital output (configurable)</b>		
Output high / low	24 V, 100 mA / high resistance	
Number	1	
Delay and hold time	0.0 ... 60.0 s (adjustable in 0.1 s steps)	
<b>Output for standard signals</b>		
Current loop output (insulated, passive)	4-20 mA	
Number	1, 2, 4, 6, 8	

<sup>1)</sup> 62 MB when FFT or envelope analysis is enabled  
<sup>2)</sup> 96 kHz sampling, 24 bits, 1 channel

Technical Data		VLX HD-T 6.0
<b>LED-Indicators</b>		
Per device	1x power, 4x evaluation zones, 1x network link, 1x SD card inserted and 1x network activity	
Per Channel	IEPE OK, short circuit, open, overload	
<b>Interfaces</b>		
Configuration	USB 2.0, Ethernet (Modbus TCP, HTTP API, data stream device option), CANopen	
Data protocol / streaming	HTTP API, seamless streaming of sensor signals on x64, x86 or ARM architectures (Windows / Linux)	
<b>Operation voltage supply</b>		
Voltage / Current consumption	24 V DC $\pm 20\%$ / max. 500 mA	
<b>Mechanical data</b>		
Dimensions (W x D x H, in mm)	45 x 114.5 x 99 (1-4 channels) / 67.5 x 114.5 x 99 (6-8 channels)	
Weight	250 g (1-4 channels) / 380 g (6-8 channels)	
Mounting	Mounting rail DIN TS35	
Installation position	vertical / horizontal	
<b>Environmental conditions</b>		
Protection class	IP20	
Relative humidity, no condensation	5 .. 95 %	
Ambient Temperature (Operation)	-20 .. 60 °C	