



VLE-series 1-8 Vibration control



Reliable machine protection





Vibration monitoring according to DIN / ISO 10816/20816

Monitoring of machine vibrations - cost-saving and safe with VibroLine

VibroLine monitors your machines and plants according to the series of standards **DIN/ISO 10816/20816**. Templates in the free configuration software contain all necessary settings. Other monitoring methods can be individually configured.

The current vibration state of the machines is displayed directly via the integrated **zone display** by means of coloured LEDs.

The current **status of the measurement chain** is signaled individually for each channel.

In addition, **alarms** can be signaled in two stages via digital outputs or an **emergency shutdown** can be implemented directly via an changeover relay output.

For further processing of the vibration signal, a separate **4-20 mA** output is available for each channel.

Additional monitoring methods

In addition to standard-compliant overall vibration characteristics, VibroLine also allows you to monitor specifically:

- **Order values** (unbalance, misalignment)
- **Characteristic values of acceleration** (rolling bearing damages)
- **Collision monitoring** (e.g. on milling spindles)

Each measuring channel (1-8) can be parameterized individually.

Preventive maintenance, for example:

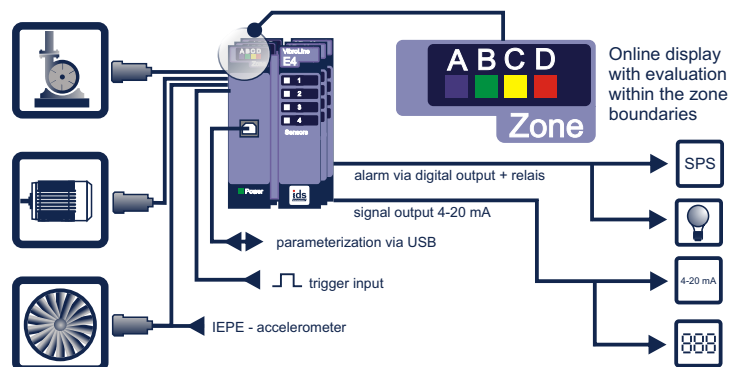
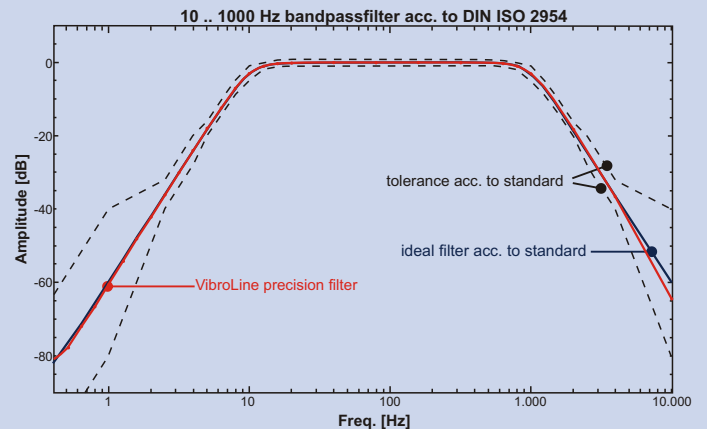
- pumps
- fans
- electric drives
- centrifuges
- blenders
- machining centers



Vibration characteristics with precision

The requirements for the measurement equipment (DIN ISO 2954) are met with high precision with VibroLine, especially the exact compliance with the specified filter limits and slopes.

Particularly short reaction times of <0.7 ms are achieved for collision monitoring on machining centers.



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Easy parameterization and installation

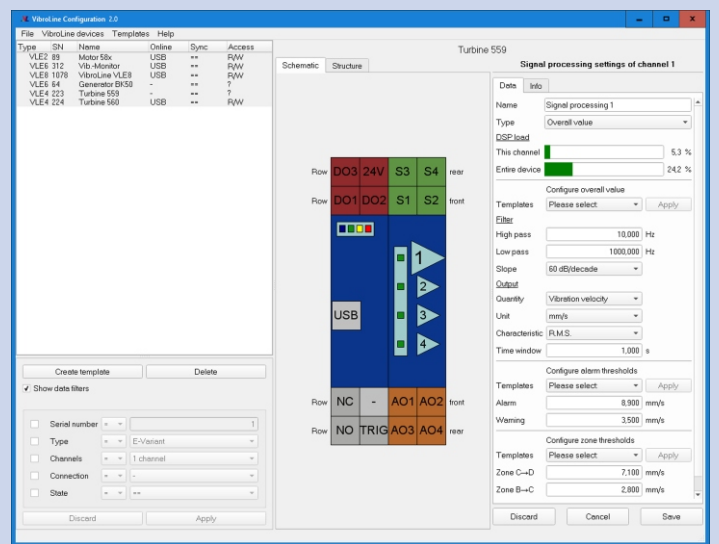
Software parameterization via USB

The graphical operating concept of the configuration software allows intuitive and fast parameterization of the VibroLine devices without training time and can be easily handled by anyone.

The VibroLine devices can be parameterized offline as a template or online directly. All devices are managed locally in a shared database.

To adapt the alarm and zone limits to systems already in operation, the actual levels of the vibration characteristics can be displayed in real time via the software.

The devices can be password protected against unauthorized access.



Equipment and delivery

The VibroLine series is available with devices of different number of channels (1,2,4,6,8). In addition to the device, an installation CD with the free configuration software in German and English is included.

In addition, you will receive complete sets (VLE1-8 SC) including the appropriate accelerometers and a measuring chain calibration.

Accessories (optional)

Cables (also drag chain suitable), M12 connectors, 24V power supplies, ATEX Zone 0 - certified sensors and suitable safety barriers.

Displays

For direct display of the vibration values, we offer displays for installation in control panels. These are controlled by the VibroLine devices via the 4-20 mA output for each channel separately.

Setup

The clear labeling of all inputs and outputs on the device enables correct installation of all electrical connections. In addition, all terminals are designed as plug-in units with four connections each, making installation of the devices even easier.



Service

On-site installation by IDS:

Our experienced personnel use the VibroMatrix measuring system to perform comprehensive measurements on the machines to be monitored. Specific monitoring features are then defined. This set of parameters is then written to the VibroLine devices either directly on site or before delivery of the device.

VibroMatrix rental option:

VibroMatrix provides you with a tool for in-depth vibration diagnosis. You carry out the measurement, analysis and parameter setting yourself. The management and parameterization of the VibroLine devices is then carried out via the configuration software.

Technische Daten • Technical Data

		VLE1	VLE2	VLE4	VLE6	VLE8
Messeingänge • Measuring inputs						
Anzahl • Number		1	2	4	6	8
Messbereich • Measurement range	V AC	± 10, IEPE zuschaltbar • IEPE supply selectable				
Verstärkungen • Gains		1 / 25 (kanalweise umschaltbar • channelwise switchable)				
Rauschen • Noise @ 0.1 .. 40 000 Hz, rms	mV	< 0,25 (Verstärkung • Gain 1), < 0,015 (Verstärkung • Gain 25)				
Rauschen • Noise @ 10 .. 1000 Hz, rms	mV	< 0,06 (Verstärkung • Gain 1), < 0,005 (Verstärkung • Gain 25)				
Messfehler • Measurement error	%	< 4				
Digitaler Triggereingang • Digital trigger input						
Anzahl • Number		1				
Konfiguration • Configuration		Eingang für Drehzahlsignal • Input for speed indicator				
Pegel • Level	V	0 .. 24				
Schaltswelle • Switching threshold	V	0.5 .. 24 (einstellbar • adjustable)				
Minimale Impulsdauer • Minimum pulse length	µs	12				
Signalverarbeitung (kanalweise unterschiedlich einstellbar) • Signal processing (allows channelwise different setups)						
Anzahl • Number		1	2	4	6	8
Abtastung der Senoreingänge • Sampling of sensor inputs		24 Bit @ 96 000 Hz				
Bandpassfilter • Bandpass filter		Butterworth, 40/60 dB/dec, 0.1 .. 40000 Hz (frei einstellbar • freely adjustable)				
Ordnungsfiler • Order filter		Ganze und gebrochene Ordnungen • Integral and fractional orders				
Schwingungsmessgrößen • Vibration quantities		Beschleunigung, Geschwindigkeit, Weg • Acceleration, velocity, displac.				
Überwachte Kennwerte • Monitored characteristics		Effektiv-, Spitzen-, Spitze-Spitze-Wert • R.m.s., peak, peak to peak value				
Alarmmanagement • Alarm management		2 Alarme und 4 Zonen pro Kanal • 2 alarms and 4 zones per channel				
Zykluszeit • Cycle time	ms	8 (0,333 für Crashüberwachung • 0.333 for crash detection)				
Ausgang für Überwachungswerte • Output for monitored characteristics						
Anzahl • Number		1	2	4	6	8
Stromschleifenausgang • Current loop output	mA	4 - 20 (isoliert • insulated)				
Digitalausgang • Digital output						
Anzahl • Number		3				
Ausgang High • Output High		24 V, 100 mA				
Ausgang Low • Output Low		Hochohmig • High-resistance				
Verzögerungs- und Haltezeit • Tripping and hold delay	s	0.0 .. 60.0 (einstellbar in 0.1 s Schritten • adjustable in 0.1 s steps)				
Relaisausgang • Relais output						
Anzahl • Number		1				
Typ • Type		Wechselkontakt • Changeover contact				
Schaltleistung • Switching power		max. 60V, max. 2 A				
Verzögerungs- und Haltezeit • Tripping and hold delay	s	0.0 .. 60.0 (einstellbar in 0.1 s Schritten • adjustable in 0.1 s steps)				
Anzeigen • Indicators						
pro Gerät • per device		1x Versorgung und 4x Bewertungszonen • 1x power and 4x evaluation zones				
pro Kanal • per channel		IEPE ok, Kurzschluss, offen, Übersteuer. • IEPE ok, short circ., open, overload				
Schnittstellen für Konfiguration und Messung • Interfaces for Configuration and Measurement						
USB 2.0		ja • yes				
Betriebsspannungsversorgung • Operation voltage supply						
Spannung • Voltage	V DC	24 ± 20 %				
Stromaufnahme • Current consumption	mA	max. 500				
Umweltbedingungen • Environmental conditions						
Schutzart • International protection marking		IP20				
Umgebungstemperatur • Ambient temperature	°C	-20 .. 60				
Relative Luftfeuchte • Relative humidity	%	5 .. 95 (keine Betauung • no condensation)				
Mechanische Daten • Mechanical data						
Gehäusematerial • Housing material		Polyamid • Polyamide				
Gehäusebrennbarkeitsklasse • Housing flammability class		V0 (nach UL94 • according to UL94)				
Masse • Weight	g	250		380		
Abmessungen BxHxT • Dimensions WxHxD	mm	45 x 99 x 114.5			67.5 x 99 x 114.5	
Befestigung • Mounting		Tragschiene TS35 • Mounting rail DIN TS35				