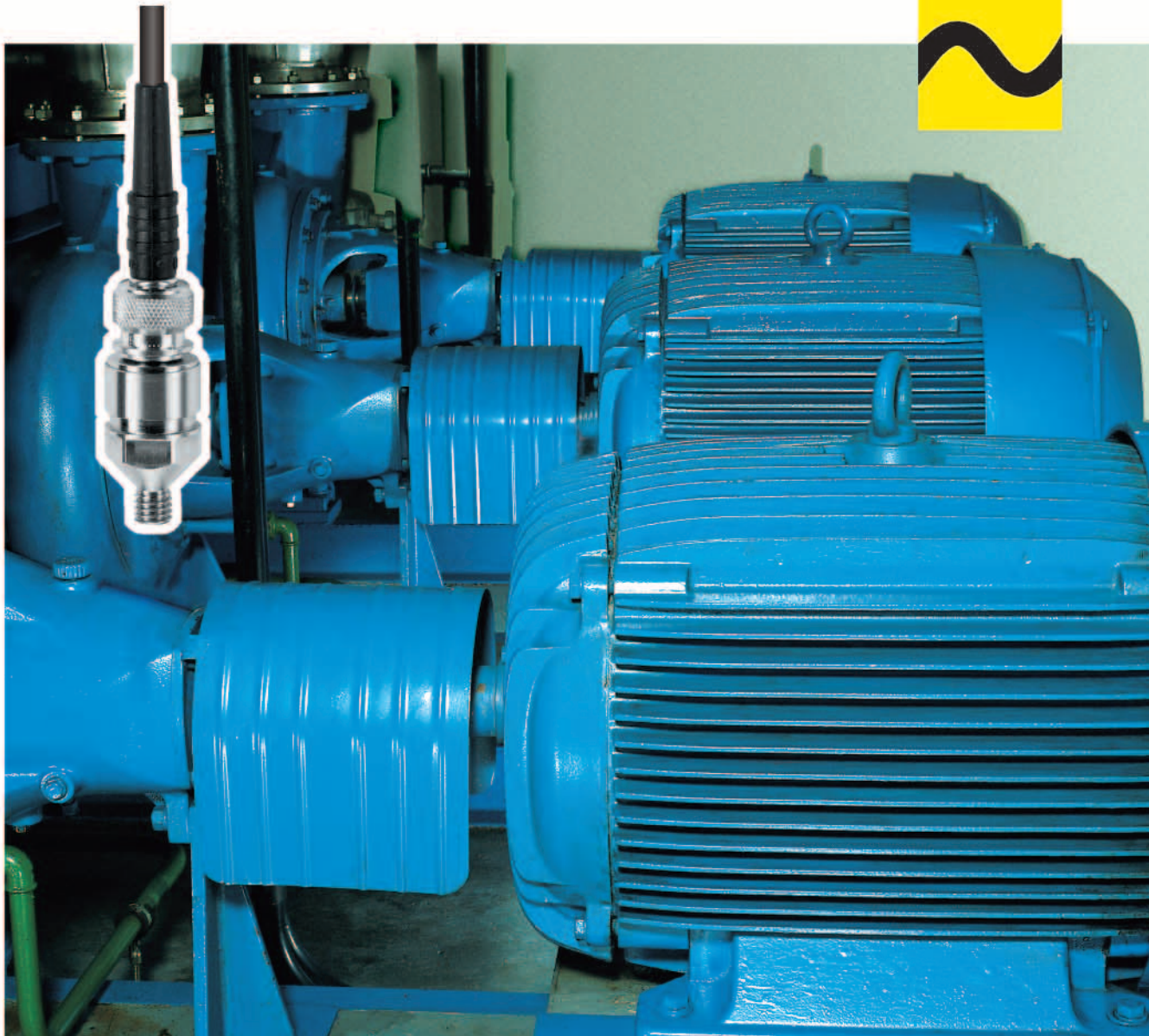




db PRÜFTECHNIK

VIBREX®

Flexibility in machine protection and monitoring



Permanent monitoring for 1 or 2 locations

Continuous monitoring

VIBREX® provides a modular solution for one- or two-channel monitoring of vibration severity and rolling element bearing condition and performs automated alarm-based switching as well. This new approach brings reliable control into an affordable range for the vast majority of rotating equipment. Even inaccessible machines can now be monitored at a fraction of the usual expense.

VIBREX® cuts costs with 2-in-1 sensors

VIBREX® slashes investment costs by using the patented dual-function Tandem-Piezo® sensor to measure both machine vibration and bearing signals with less sensors, less cable, less installation effort: only one double-duty accelerometer and one economical RG58 cable are needed per bearing, so you can use the same standard sensor for all applications. And no signal amplifiers are required, even over large distances!



- 'Install-and-forget' simplicity
- Flexible modular design
- Budget-priced monitoring
- All-in-one housing
- 4 – 20 mA output
- Zero-potential relay outputs
- IP65 for harsh environments



Machine vibration



Bearing condition

Rugged industrial design

VIBREX® industrial accelerometers bond or screw into place in only a few minutes. IP67/68 protection means they're fully waterproof, and their advanced Tandem-Piezo® design provides superior resistance to base strain and thermal effects.

ations

Reliable bearing monitoring
VIBREX® utilizes the shock pulse technique to evaluate rolling element bearing condition: high-frequency signals indicate bearing damage long before failure so that replacement can be planned well ahead of time, reducing downtime, parts and labor.

Machine vibration severity
Vibration modules are available for standard severity rating according to ISO guidelines – or for special applications such as gearboxes and low-speed machines (all the way down to 60 rpm!)



Active control and more...

VIBREX® springs into action when serious conditions arise: separate alarm and warning LED indicators show you at a glance when measurements exceed limit settings. An alarm relay issues a signal and switches off the machine via PLC.

Machine diagnosis

Upon warning, measurement signals can be analyzed via direct sensor connection to VIBROTIP®, VIBSCANNER® or VIBROSPECT® FFT – for more extensive machine diagnosis or spectrum analysis.

Reliable self-diagnosis

Each module contains self-diagnostic routines that automatically alert you to short circuits, broken connections and power status; the OK relay trips to indicate the problem immediately.

Alarm/shutoff delay

Avoid false alarms/shutoff by setting a delay interval to ignore transient signal elevations (such as those during machine startup).

Motors



Blowers/
Fans



Pumps



Gearboxes



Refiners



Stirrers



Reciprocating
machines



Screw
compressors



Machine
tools



Separators

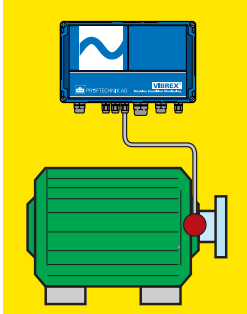


Turbo-
compressors

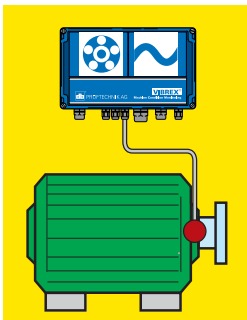


Monitoring 'à la carte' with specialized modules

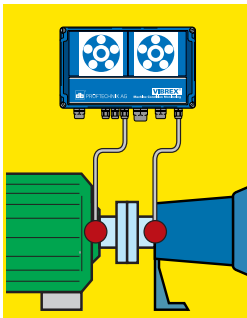
Mix and match modules as needed:



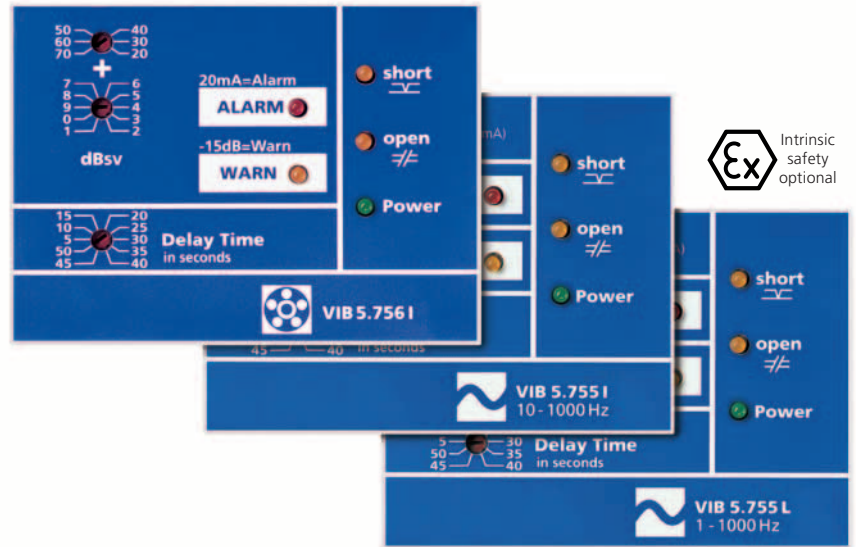
One-channel bearing or vibration monitoring at one location



Combined one-channel bearing and vibration monitoring at one location



Two-channel bearing and/or vibration monitoring at two locations



Ex Intrinsic safety optional

Select

the plug-in VIBREX® module for your machine type and RPM:

- Vibration severity (ISO)
- Bearing condition
- Vibration, low-speed machines
- Bearing condition, low-speed
- Gearbox vibration
- Quick shutoff
- mV signal output
- Other applications on request

Technical data

VIBREX

Operating modes	1- or 2-channel monitoring: rolling element bearings and/or overall vibration severity
Inputs	1 or 2 accelerometers; mains/DC power
Sensor	Accelerometer 1.00 $\mu\text{A}/\text{ms}^2$ (5 $\mu\text{A}/\text{ms}^2$ low-speed); max. cable length: 500 m/ 1625 ft.
Outputs (each module)	1 analog signal output (4-20 mA) 1 alarm relay (max. 3 A @ 250 VAC) 1 OK relay for warning/error
Display	mV output for signal analysis (optional) 5 LEDs: alarm, warning, short circuit, open circuit and power supply
Power requirements	AC: 115V/230V, switchable; 50/60 Hz or DC: 24 V, <300 mA
Operating temperature	-10°C to +60°C 14°F to 140°F
Protection	IP 65 (dustproof/spray waterproof)
Dimensions (W x H x D)	200 mm x 120 mm x 77 mm 7 7/8" x 4 3/4" x 3"
Intrinsic safety	[EEx ib] IIC T4, optional (with limiting device - VIB 3.550)

Rolling element bearing module

Parameter	Shock pulse evaluation rolling bearings (optional: 'low-pulse' for ≤ 120 rpm)
Range	20 to 79 dB_{sv}
Alarm/warn - outputs - delay	Alarm: adjustable from 20 to 79 dB_{sv} Warn: fixed 15 dB_{sv} below alarm level Adjustable from 5 to 50 seconds

Vibration severity module

Parameter	Vibration velocity according to ISO
Frequency range	0 Hz - 1 kHz (ISO) 1 Hz - 1 kHz ('low-speed', 60..600 min^{-1}) 2 Hz - 1 kHz ('low-speed', 120..600 min^{-1}) 1 Hz - 3 kHz (gear, $\text{RPM} > 60$ min^{-1}) 2 Hz - 3 kHz (gear, $\text{RPM} > 120$ min^{-1}) 10 Hz - 3 kHz (gear, quick shutoff)
Meas. range	0 - 10, 20, 50, 100, 600, 2000 mm/s (adj.)
Alarm/warn outputs	Alarm/warn limits adjustable as percentage of total measurement range
Alarm/warn delay	Adjustable from 5 to 50 seconds (50ms to 500 ms for quick shutoff vers.)

Order numbers

Standard systems*

- VIB 5.761 I** VIBREX® vibration monitoring for 1 location incl. 1 accelerometer and 3m/9'9" cable.
- VIB 5.762 I** VIBREX® vibration monitoring for 2 locations incl. 2 accelerometers and 3m/9'9" cable.
- VIB 5.764 I** VIBREX® bearing monitoring for 2 locations incl. 2 accelerometers and 3m/9'9" cable.
- VIB 5.765 I** Combined VIBREX® vibration and bearing monitoring for 1 location incl. 1 accelerometer and 3m/9'9" cable.

*Special versions such as the low-speed bearing module or bonded accelerometer for thin-walled bearing housings are described in VIBREX® sales leaflets available free of charge.

Visit us at www.pruftechnik.com

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Productive maintenance technology