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.
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® 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).
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

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

**Outputs**
1 analog signal output (4-20 mA) per module, 1 alarm relay (max. 5 A @ 250 VAC)

**Sensor**
Accelerometer 1.00 µA/ms² (5 µA/ms² low-speed), max. cable length: 500 m / 1625 ft.

**Power requirements**
AC: 115V/230V, switchable; 50/60 Hz or DC: 24 V, <300 mA

**Operating temperature**
-10°C to +60°C

**Protection**
IP 65 (dustproof/spray waterproof)

**Dimensions**
200 mm x 120 mm x 77 mm

**Intrinsic safety**
Ex e IIC T4 (optional)

**Rolling element bearing module**

**Parameter**
Shock pulse evaluation of rolling element bearings (optional: ‘low-pulse’ for < 120 rpm)

**Range**
20 to 79 dB

**Alarm/Warning**
Alarm: adjustable from 20 to 79 dB, Warn: fixed 15 dB below alarm level

**Delay**
Adjustable from 5 to 50 seconds

**Vibration severity module**

**Parameter**
Vibration velocity according to ISO (optional: low-speed for 60 to 600 rpm or gear meshing, 1 to 3000 Hz)

**Range**
0 to 10, 20, 50, 100 mm/s (adjustable)

**Alarm/Warning**
Alarm/Warning limits adjustable as a percentage of total measurement range

**Delay**
Adjustable from 5 to 50 seconds (50 ms to 500 ms for quick shutoff version)

**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**
  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.

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