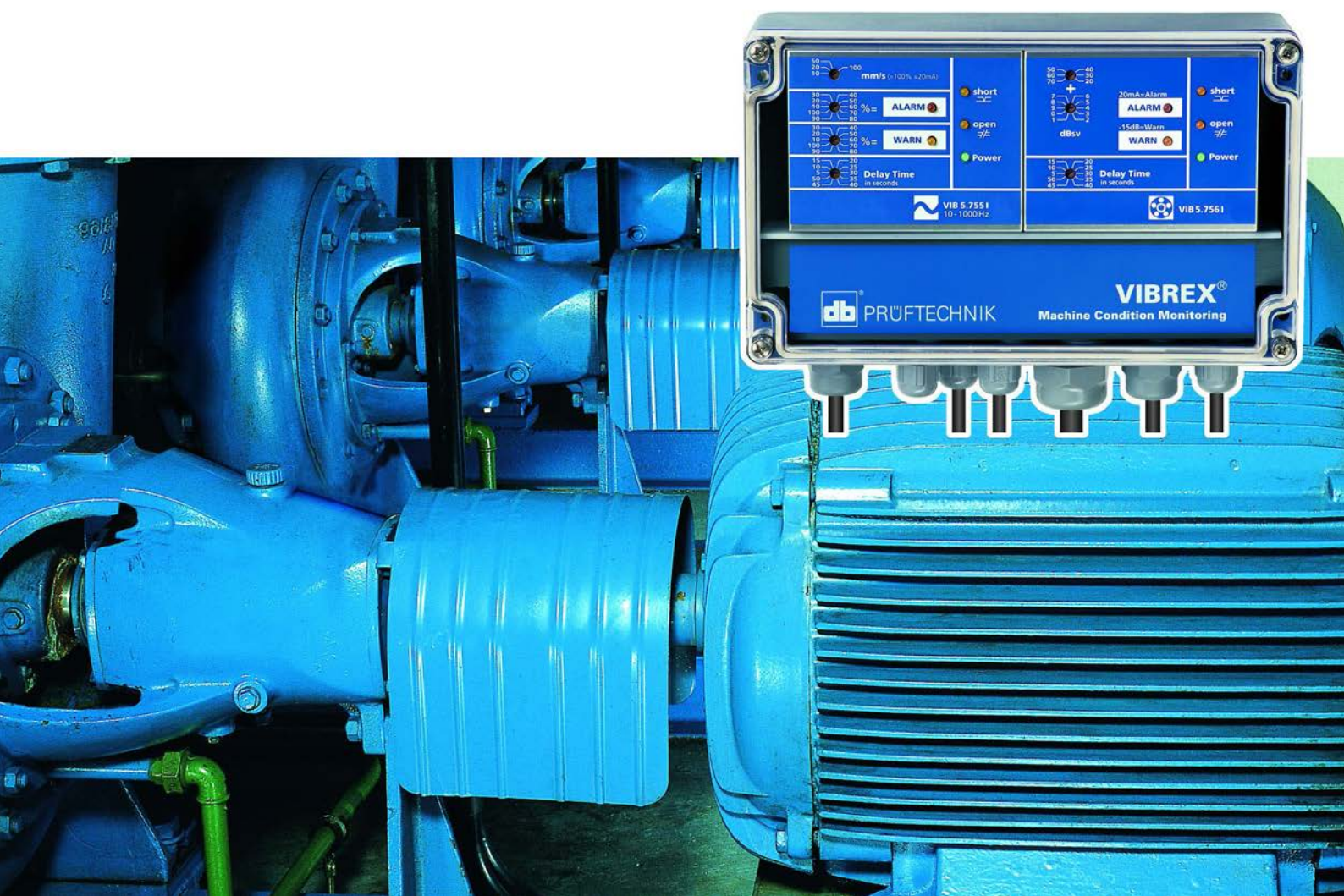


VIBREX®

Machine vibration
Bearing condition
Machine protection

Catalog



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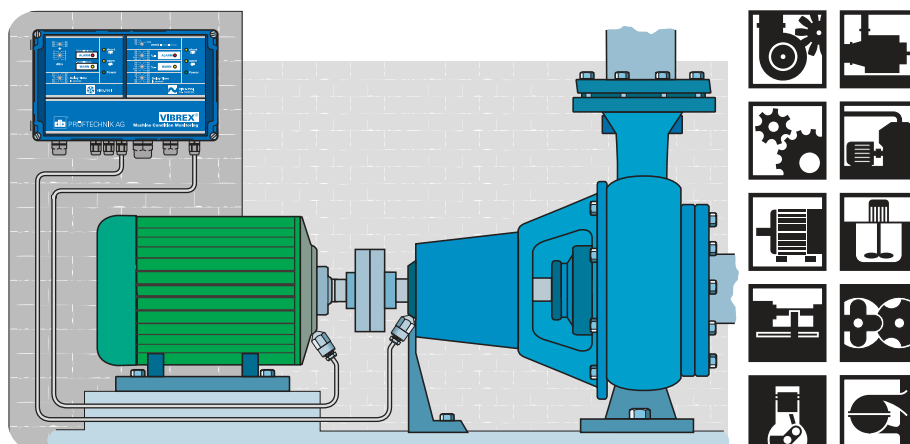
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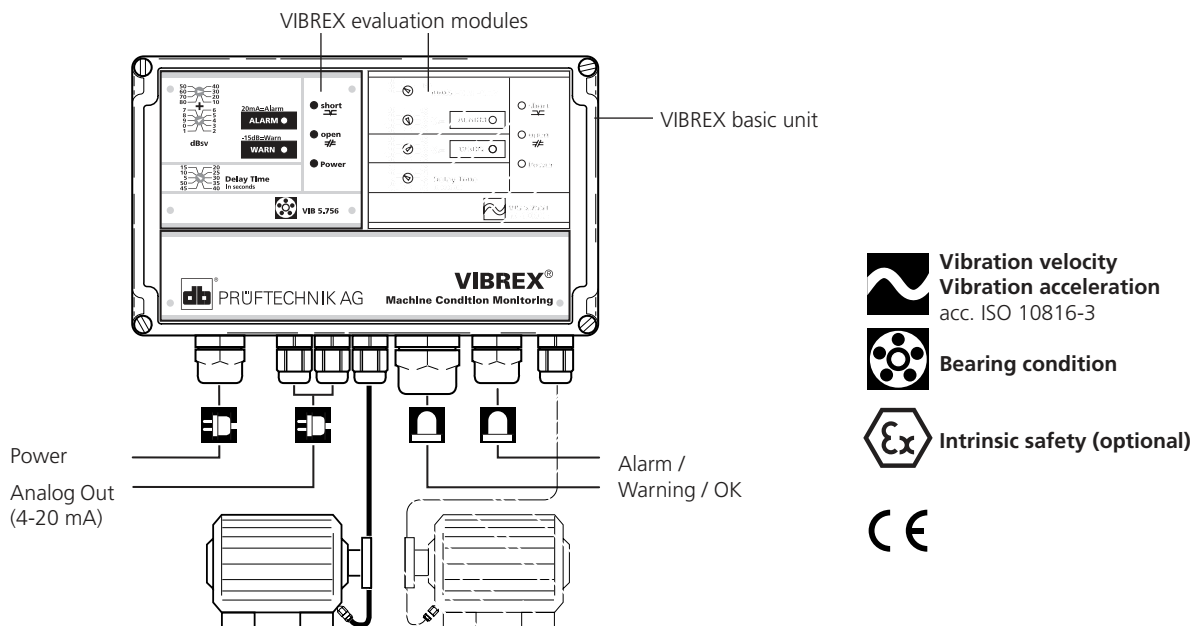
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VIBREX - Flexibility in machine protection and monitoring

1

2



VIBREX provides a modular solution for one- or two-channel monitoring of RMS vibration severity, bearing condition or other important machine health indicators and performs automated alarm-based switching as well. This 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 features overview

- One or two measurement channels
- Machine vibration and bearing condition monitoring
- Budget-priced components and installation
- Simple installation and commissioning
- Industry-standard components
- Plug-in modules for many applications
- Potential free relay outputs
- Automatic alarming
- Adjustable alarm / warning thresholds
- Adjustable alarm delay avoids false alarms due to transient signal elevations (e.g. when the machine is switched on).
- Self-diagnostic routines automatically alert you to short-circuit, open lines and disrupting power supply
- 4-20 mA output signal level
- Buffered signal output (mV) for analysis as an option
- Special version for ICP-type accelerometers available
- Intrinsically safe version as an option

VIBREX components

Basic units

VIB 5.750	Basic unit, standard
VIB 5.752	Basic unit with mV output, standard
VIB 5.753 ICP	Basic unit with mV output, ICP-type

Vibration modules

VIB 5.755 G	Vibration module for gear boxes (1 Hz ... 3 kHz)
VIB 5.755 GF	Vibration module for gear boxes (2 Hz ... 3 kHz)
VIB 5.755 GS	Vibration module for refiners, quick shut off
VIB 5.755 I	Vibration module for standard machines, ISO 10816-3
VIB 5.755 ICP	Vibration module for standard machines, ISO 10816-3, ICP-type accelerometer
VIB 5.755 IH	Vibration module for high vibration levels (< 2000 mm/s), ISO 10816-3
VIB 5.755 IS	Vibration module for standard machines, ISO 10816-3, quick shut off
VIB 5.755 IUS	Vibration module for standard machines, ISO 10816-3, U.S. version, imperial units
VIB 5.755 IV	Vibration module for high vibration levels (< 600 mm/s), ISO 10816-3
VIB 5.755 L	Vibration module for low-speed machines (1 Hz ... 1 kHz)
VIB 5.755 ML	Vibration module for low-speed machines (2 Hz ... 1 kHz)

Bearing modules

VIB 5.756 I	Bearing condition module
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Acceleration modules

VIB 5.757 G	Acceleration module for high-speed gear stages
VIB 5.757 R	Acceleration module for high-speed refiner disks

Technical data, VIBREX evaluation modules

PARAMETER		VIB 5.755 I	VIB 5.755 IS	VIB 5.755 IH	VIB 5.755 IUS	VIB 5.755 IV
Meas.	Measurement quantity	RMS vibration velocity				
	Frequency range	10 Hz ... 1 kHz (ISO)				
	Measurement range, adjustable	0 ... 10 / 20 / 50 / 100 mm/s		0 ... 200 / 400 / 1000 / 2000 mm/s	0 ... 0.4 / 0.8 / 2 / 4 inch/s	0 ... 60 / 120 / 300 / 600 mm/s
Electrical	Operating voltage	18 ... 30 V DC				
	Max. current	approx. 35 mA				
	Output	4-20 mA, analog; with basic unit				
Settings	Status / Alarm display	5 LEDs for alarm/warning, short circuit, open circuit and power supply status				
	Alarm / Warning outputs	Alarm and warning limits adjustable as percentage of total measurement range in steps of 10%				
	Alarm / Warning delay	5 ... 50 s	50 ... 500 ms	5 ... 50 s		
	Sensor type	Current LineDrive accelerometer, Sensitivity: 1,0 µA/ms ²				

PARAMETER		VIB 5.755 G	VIB 5.755 L	VIB 5.755 ML	VIB 5.755 GF	VIB 5.755 GS
Meas.	Measurement quantity	RMS vibration velocity				
	Frequency range	1 Hz ... 3 kHz	1 Hz ... 1 kHz	2 Hz ... 1 kHz	2 Hz ... 3 kHz	10 Hz ... 3 kHz
	Measurement range, adjustable	0 ... 10 / 20 / 50 / 100 mm/s				
Electrical	Operating voltage	18 ... 30 V DC				
	Max. current	approx. 35 mA				
	Output	4-20 mA, analog; with basic unit				
Settings	Status / Alarm display	5 LEDs for alarm/warning, short circuit, open circuit and power supply status				
	Alarm / Warning outputs	Alarm and warning limits adjustable as percentage of total measurement range in steps of 10%				
	Alarm / Warning delay	5 ... 50 s				50 ... 500 ms
	Sensor type	Current LineDrive (CLD) accelerometer, Sensitivity: 5,35 µA/ms ²		CLD accelerometer, Sensitivity: 1,0 µA/ms ²		

PARAMETER		VIB 5.756 I	VIB 5.757 G	VIB 5.757 R
Meas.	Measurement quantity	Shock pulse (Max value in dB _{sv})	RMS vibration acceleration	
	Frequency range	---	2 Hz ... 20 kHz	500 Hz ... 20 kHz
	Measurement range, adjustable	20 - 79 dB _{sv}	0 ... 60 / 120 / 300 / 600 m/s²	0 ... 200/ 400/ 1000/ 2000 m/s²
Electrical	Operating voltage	18 ... 30 V DC		
	Max. current	approx. 35 mA		
	Output	4-20 mA, analog; with basic unit		
Settings	Status / Alarm display	5 LEDs for alarm/warning, short circuit, open circuit and power supply status		
	Alarm / Warning outputs	Alarm limit adjustable from 20 to 79 dB _{sv} Warning level fixed 15 dB _{sv} below 'Alarm'	Alarm and warning limits adjustable as percentage of total measurement range in steps of 10%	
	Alarm / Warning delay	5 ... 50 s		
	Sensor type	Current LineDrive accelerometer, Sensitivity: 1,0 µA/ms ⁻²		

PARAMETER		VIB 5.755 ICP
Meas.	Measurement quantity	RMS vibration velocity
	Frequency range	10 Hz ... 1 kHz (ISO)
	Measurement range, adjustable	0 ... 10 / 20 / 50 / 100 mm/s
Electrical	ICP current	5,8 mA ... 8,3 mA
	Sensor supply	24 V ± 5%
	AC signal output	< 50 g
Settings	Status / Alarm display	5 LEDs for alarm/warning, short circuit, open circuit and power supply status
	Alarm / Warning outputs	Alarm and warning limits adjustable as percentage of total measurement range in steps of 10%
	Alarm / Warning delay	5 ... 50 s
	Sensor type	ICP-type accelerometer, Sensitivity: 100 mV/g

Typical application of the VIBREX modules

VIB 5.755 G

Gear mesh monitoring on the low-speed stage (> 1 Hz) or on the high-speed stage (< 3 kHz).

VIB 5.755 GF

Gear mesh monitoring on the low-speed stage (> 2 Hz) or on the high-speed stage (< 3 kHz).

VIB 5.755 GS

Vibration monitoring of low-speed disk refiners. This module enables shorter delay times to be set up for the relay output contacts (50 - 500 ms, standard: 5-50s).

Note: The product of the RPM (in Hz) and the number of teeth in the refiner disks should lie within the range of 3 kHz.

VIB 5.755 I

Vibration monitoring on high-speed machines (> 600 rpm) acc. to ISO 10816-3.

VIB 5.755 ICP

Vibration monitoring on high-speed machines (>600 rpm) acc. to ISO 10816-3.

VIB 5.755 IH

Vibration monitoring on machines with very high vibration levels (e.g. shaking table)

VIB 5.755 IS

Vibration monitoring on high-speed machines (> 600 rpm) acc. to ISO 10816-3. This module enables shorter

delay times to be set up for the relay output contacts (50 - 500 ms, standard: 5-50s).

VIB 5.755 IUS

Vibration monitoring on high-speed machines (> 600 rpm) acc. to ISO 10816-3. US version of the standard module; measuring range in inch/s.

VIB 5.755 IV

Vibration monitoring on vibro mixers in the pharmaceutical industry.

Note: The high vibration level places high demands on the installation of the sensor and cable.

VIB 5.755 L

Vibration monitoring on very low-speed machines such as cooling tower fans, mixers, stirrers, etc.

VIB 5.755 ML

Vibration monitoring on medium-speed and low-speed machines (> 120 rpm) acc. to ISO 10816-3.

VIB 5.756 I

This module is used for bearing monitoring.

VIB 5.757 G

This module can be used to monitor high-speed gearboxes (turbo gearboxes, compressors)

VIB 5.757 R

This module can be used to monitor high-speed disk refiners, for example.

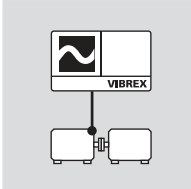
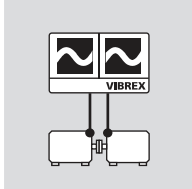
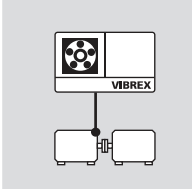
Technical data, VIBREX basic units

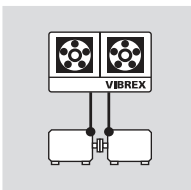
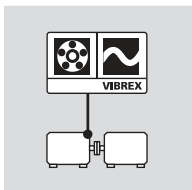
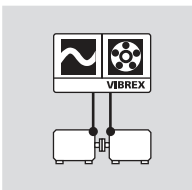
PARAMETER		VIB 5.750	VIB 5.752	VIB 5.753 ICP
Interfaces	Slots	1 or 2 modules		
	Inputs	Current LineDrive-type accelerometer, 2x Mains supply 24 VDC supply		ICP-type accelerometer, 2x Mains supply 24 VDC supply
	Outputs	1 alarm relay 1 OK relay for self diagnosis / warning 1 analog level output (4-20mA)	1 alarm relay 1 OK relay for self diagnosis / warning 1 analog level output (4-20mA) mV output for signal analysis	
	Switching power	max. 3 A @ 250 V AC		
	Operating modes	combined bearing condition / vibration monitoring (1- / 2-channel), pure bearing condition / vibration monitoring (1- / 2-channel)		
Electrical	Power supply	AC: 115V/230V, 6VA switchable; 50/60 Hz, 10-15% (IEC 93) DC: 24V, <300 mA, 10-15% (IEC 93)		
	Overload protection	Thermal fuse in transformer and resistance fuse (160 mA slow-acting)		
	Signal output (mV), from HW 2.10	n/a	direct sensor signal (buffered, 100 Ohm)	
	Transmission	---	1.0 mV _{eff} /ms ⁻² (=10 mV/g)* 5.35 mV _{eff} /ms ⁻² (=52 mV/g)**	10,2 mV _{eff} /ms ⁻² (=100 mV/g)
	Frequency response	---	corresponds to sensor	
Environment	Operating temperature	-10 °C ... +60 °C		
	Environmental protection	IP 65 (dustproof / spray waterproof)		
	Vibration limit	< 50 m/s ² (med. freq.: 60 Hz, bandw.: 100 Hz)		
	Housing material	Plastic (polycarbonate, Macrolon) with transparent lid, Protection class II		
	Dimensions	200 mm x 120 mm x 77 mm (B x H x T)		
	Intrinsic safety	optional, with safety barrier and intrinsically safe sensors		

* Current LineDrive-type accelerometer (1.0 µA/ms²)

** Current LineDrive-type accelerometer (5.35 µA/ms²)

VIBREX delivery packages (overview)

Module configuration				 Vibration module
Description	Vibration monitoring for 1 measurement location incl. 1 sensor and 1 cable (3 m)	Vibration monitoring for 2 measurement locations incl. 2 sensors and 2 cables (3 m)	Bearing condition monitoring for 1 meas. location incl. 1 sensor and 1 cable (3 m)	 Bearing module
Standard version (ISO)	VIB 5.761 I¹	VIB 5.762 I¹	VIB 5.763 I	¹ 10Hz - 1kHz
Standard for EX application	VIB 5.761 IX	VIB 5.762 IX	VIB 5.763 IX	² 1Hz - 1kHz (n > 60 rpm)
Standard for ICP accelerom.	VIB 5.761 ICP	VIB 5.762 ICP	n/a	³ 2Hz - 1kHz (n > 120 rpm)
Low-speed (n > 60 min⁻¹)	VIB 5.761 L²	VIB 5.762 L²	n/a	⁴ 1 Hz - 3 kHz
Low-speed (n > 120 min⁻¹)	VIB 5.761 ML³	VIB 5.762 ML³	VIB 5.763 I	⁵ 2 Hz - 3 kHz
Gear box (n > 60 min⁻¹)	VIB 5.761 G⁴	VIB 5.762 G⁴	n/a	n/a = not available
Gear box (n > 120 min⁻¹)	VIB 5.761 GF⁵	VIB 5.762 GF⁵	VIB 5.763 I	
Ordering package*	VIB 5.761	n/a	n/a	

Module configuration				
Description	Bearing condition monitoring for 2 meas. location incl. 2 sensor and 2 cable (3 m)	Combined vibration and bearing condition monitoring for 1 meas. location incl. 1 sensor and 1 cable (3 m)	Combined vibration and bearing condition monitoring for 2 meas. location incl. 2 sensor and 2 cable (3 m)	
Standard version (ISO)	VIB 5.764 I	VIB 5.765 I	VIB 5.766 I	
Standard for EX application	VIB 5.7614 IX	VIB 5.765 IX	VIB 5.766 IX	
Gear box (n > 120 min⁻¹)	VIB 5.764 I	VIB 5.765 GF	n/a	
Low-speed (n > 120 min⁻¹)	VIB 5.764 I	VIB 5.765 ML	n/a	

* Further VIBREX combinations can be ordered with special modules (e.g. acceleration module) using the ordering packages.

VIBREX vibration monitoring acc. to ISO standards, 1 channel

1

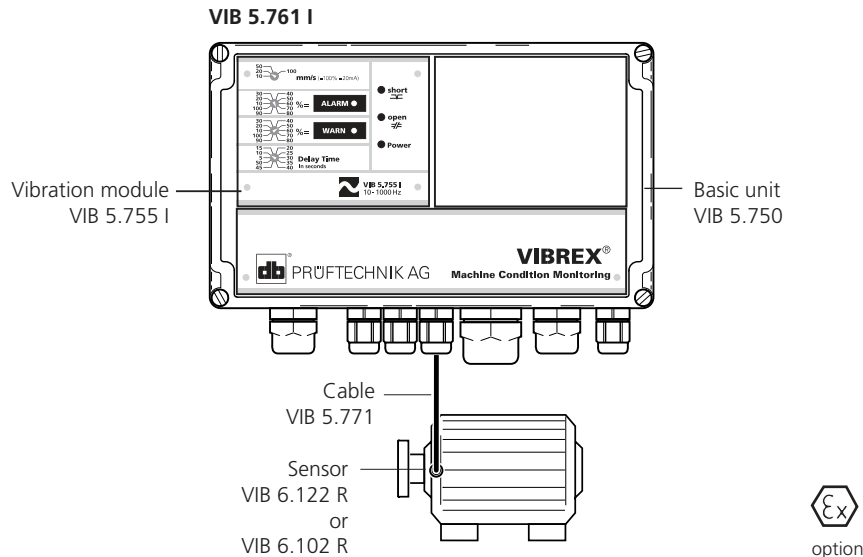
VIB 5.761 I : VIBREX vibration monitoring ISO, 1 channel, standard version

VIB 5.761 IX : VIBREX vibration monitoring ISO, 1 channel, intrinsic safety

VIB 5.761 IUS : VIBREX vibration monitoring ISO, 1 channel, standard U.S. version

VIB 5.761 ICP : VIBREX vibration monitoring ISO, 1 channel, ICP version

2



Description

The VIBREX standard package **VIB 5.761 I** is used to monitor vibration severity on standard machines. The U.S. package **VIB 5.761 IUS** provides imperial units.

The VIBREX package **VIB 5.761 IX** contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensor within the intrinsically safe area via the PRÜFTECHNIK current limiting device (VIB 3.550).

The package **VIB 5.761 ICP** allows the connection of ICP-type accelerometers with the following specifications:

Power supply: 2-10 mA DC

Sensitivity: 100 mV/g

Scope of delivery **VIB 5.761 I**:

VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.755 I	Vibration module (10 Hz...1 kHz, ISO)
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.761 IUS**:

VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.755 IUS	Vibration module, U.S. version (10 Hz...1 kHz, ISO)
VIB 5.771	Cable, TNC, 3 meters
VIB 6.132 R	Industrial accelerometer for standard machines, UNC 5/16" mounting bolt
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.761 IX**:

VIB 3.550	PRÜFTECHNIK current limiting device
VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.755 I	Vibration module (10 Hz...1 kHz, ISO)
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122DEX*	Industrial accelerometer with M8 mounting bolt, intrinsically safe <u>or</u>
VIB 6.102DEX*	Industrial accelerometer with adhesive base, intrinsically safe
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.761 ICP**:

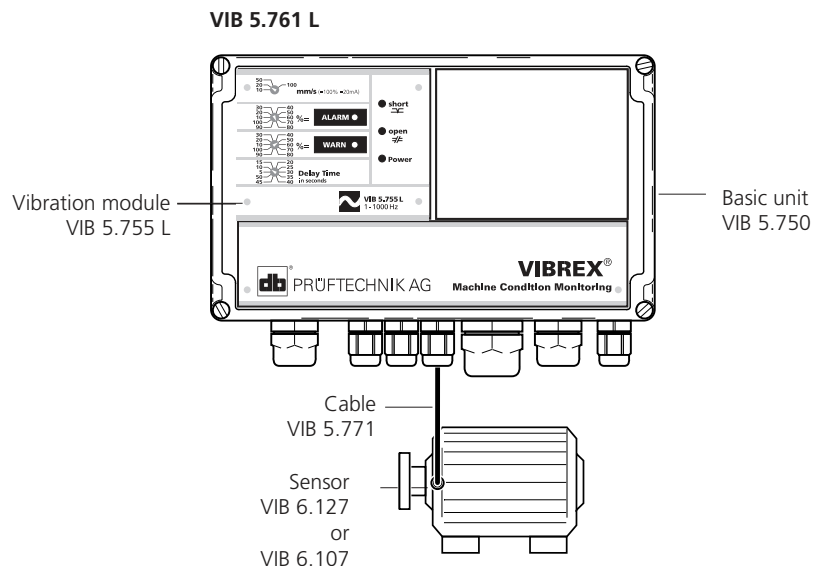
VIB 5.753	VIBREX ICP basic unit
VIB 5.754	Empty module
VIB 5.755 ICP	ICP Vibration module (10 Hz ... 1 kHz)
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIBREX vibration monitoring for low-speed machines, 1 channel

VIB 5.761 L : VIBREX vibration monitoring for low-speed machines (> 60 rpm), 1 channel

VIB 5.761 ML : VIBREX vibration monitoring for low-speed machines (> 120 rpm), 1 channel



Description

The VIBREX package **VIB 5.761 L** is used for vibration monitoring on very low-speed machines such as cooling tower fans, mixers, stirrers, etc.

The VIBREX package **VIB 5.761 ML** is used for vibration monitoring on medium-speed and low-speed machines (> 120 rpm) acc. to ISO 10816-3.

Scope of delivery **VIB 5.761 L**:

VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.755 L	Vibration module (1 Hz...1 kHz)
VIB 5.771	Cable, TNC, 3 meters
VIB 6.127*	Industrial accelerometer for low-speed machines, M8 mounting bolt, <u>or</u>
VIB 6.107*	Industrial accelerometer for low-speed machines, adhesive base
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.761 ML**:

VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.755 ML	Vibration module (2 Hz...1 kHz)
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

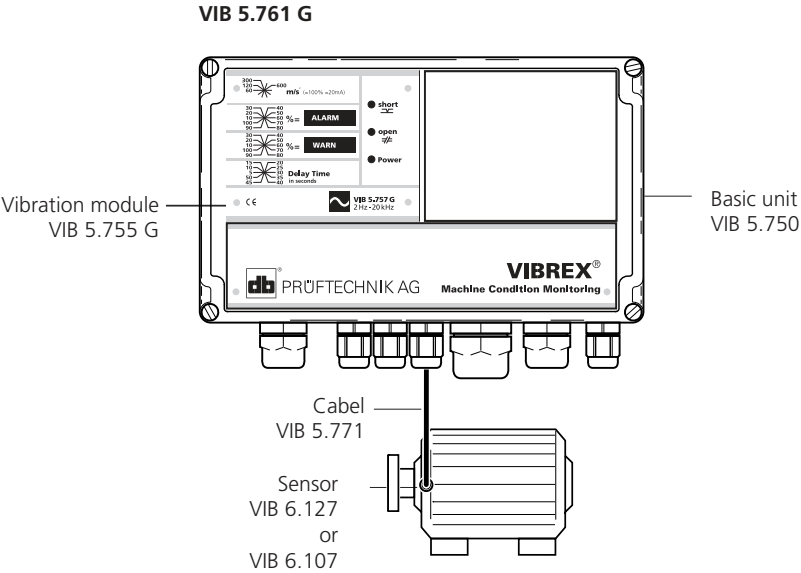
VIBREX vibration monitoring for gear boxes, 1 channel

1

VIB 5.761 G : VIBREX vibration monitoring for gear boxes (> 60 rpm), 1 channel

VIB 5.761 GF : VIBREX vibration monitoring for gear boxes (> 120 rpm), 1 channel

2



Description

The VIBREX package **VIB 5.761 G** is used for vibration monitoring on low-speed gear stages (> 60 rpm).

The VIBREX package **VIB 5.761 GF** is used for vibration monitoring on medium-speed gear stages (> 120 rpm).

Scope of delivery **VIB 5.761 G:**

- VIB 5.750 VIBREX basic unit
- VIB 5.754 Empty module
- VIB 5.755 G Vibration module (1 Hz...3 kHz)
- VIB 5.771 Cable, TNC, 3 meters
- VIB 6.127* Industrial accelerometer for low-speed machines, M8 mounting bolt, or
- VIB 6.107* Industrial accelerometer for low-speed machines, adhesive base
- VIB 9.610.G VIBREX instructions

Scope of delivery **VIB 5.761 GF:**

- VIB 5.750 VIBREX basic unit
- VIB 5.754 Empty module
- VIB 5.755 GF Vibration module (2 Hz...3 kHz)
- VIB 5.771 Cable, TNC, 3 meters
- VIB 6.122 R* Industrial accelerometer for standard machines, M8 mounting bolt, or
- VIB 6.102 R* Industrial accelerometer for standard machines, adhesive base
- VIB 9.610.G VIBREX instructions

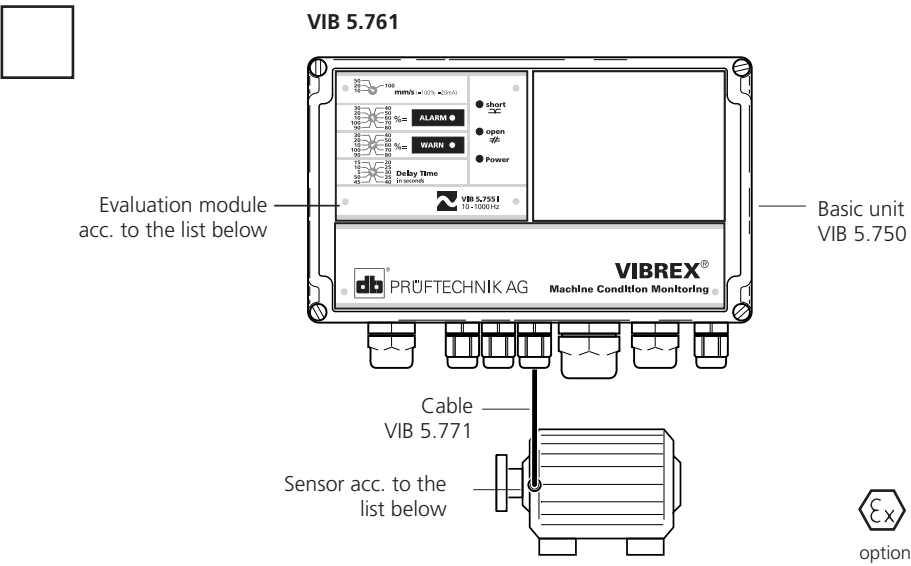
* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIBREX 1-channel ordering packages for vibration monitoring

- VIB 5.761 : VIBREX 1-channel ordering package for vibration monitoring with one sensor
- VIB 5.761 X : VIBREX 1-channel ordering package for vibration monitoring with one sensor, intrinsic safe

1

2



Description

The VIBREX 1-channel ordering packages **VIB 5.761** and **VIB 5.761 X** are intended for monitoring tasks that are not covered by the pre-configured delivery packages.

The ordering packages consist of basic components and freely selectable components*, such as the below listed special evaluation modules and the appropriate sensors.

Basic components for VIB 5.761

- VIB 5.750 VIBREX basic unit
- VIB 5.754 Empty module
- VIB 5.771 Cable, TNC, 3 meters
- VIB 9.610.G VIBREX instructions

Basic components for VIB 5.761 X

- VIB 3.550 PRÜFTECHNIK current limiting device
- VIB 5.750 VIBREX basic unit
- VIB 5.754 Empty module
- VIB 5.771 Cable, TNC, 3 meters
- VIB 9.610.G VIBREX instructions

* When ordering, please specify the required evaluation module and the appropriate sensor.
Other sensor types and cable lengths are available at a surcharge

EVALUATION MODULE		Order no.	Meas. quantity	Frequency range	Sensor
Short description	Vibration acc. to ISO, 2000 mm/s	VIB 5.755 IH	Vibration velocity	10 Hz ... 1 kHz	VIB 6.122 R or VIB 6.122 DEX
	Vibration acc. to ISO, 600 mm/s	VIB 5.755 IV	Vibration velocity	10 Hz ... 1 kHz	VIB 6.122 R or VIB 6.122 DEX
	Vibration acc. to ISO, quick shutoff	VIB 5.755 IS	Vibration velocity	10 Hz ... 1 kHz	VIB 6.122 R or VIB 6.122 DEX
	Vibration on gearboxes, quick shutoff	VIB 5.755 GS	Vibration velocity	10 Hz ... 3 kHz	VIB 6.122 R or VIB 6.122 DEX
	High-speed gearboxes, 600 m/s²	VIB 5.757 G	Vibration acceleration	2 Hz ... 20 kHz	VIB 6.122 R or VIB 6.122 DEX
	High-speed refiner, 2000 m/s²	VIB 5.757 R	Vibration acceleration	500 Hz ... 20 kHz	VIB 6.122 R or VIB 6.122 DEX

VIBREX vibration monitoring acc. to ISO standards, 2 channels

1

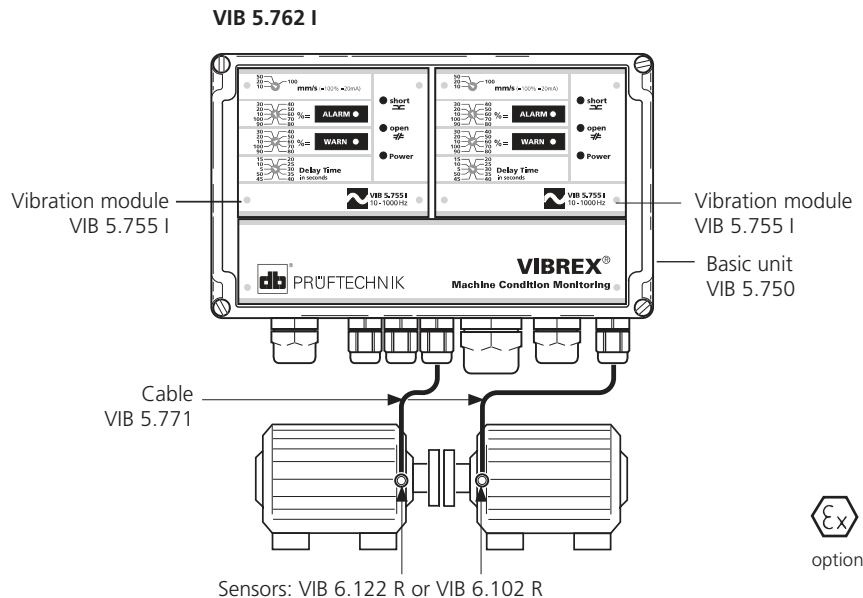
VIB 5.762 I : VIBREX vibration monitoring ISO, 2 channels, standard version

VIB 5.762 IX : VIBREX vibration monitoring ISO, 2 channels, intrinsic safety

VIB 5.762 IUS : VIBREX vibration monitoring ISO, 2 channels, standard U.S. version

VIB 5.762 ICP : VIBREX vibration monitoring ISO, 2 channels, ICP version

2



Description

The VIBREX standard package VIB 5.762 I is used to monitor vibration severity on standard machines. The U.S. package VIB 5.762 IUS provides imperial units.

The VIBREX package VIB 5.762 IX contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensors within the intrinsically safe area via the PRÜFTECHNIK current limiting devices (VIB 3.550).

The package VIB 5.762 ICP allows the connection of ICP-type accelerometers with the following specifications:

Power supply: 2-10 mA DC

Sensitivity: 100 mV/g

Scope of delivery VIB 5.762 I:

VIB 5.750 VIBREX basic unit
 VIB 5.755 I Vibration module (10 Hz...1 kHz, ISO), 2x
 VIB 5.771 Cable, TNC, 3 meters, 2x
 VIB 6.122 R* Industrial accelerometer with M8 mounting bolt, 2x, or
 VIB 6.102 R* Industrial accelerometer with adhesive base, 2x
 VIB 9.610.G VIBREX instructions

Scope of delivery VIB 5.762 IUS:

VIB 5.750 VIBREX basic unit
 VIB 5.755 IUS Vibration module, U.S. version (10 Hz...1 kHz, ISO), 2x
 VIB 5.771 Cable, TNC, 3 meters, 2x
 VIB 6.132 R* Industrial accelerometer for standard machines, UNC 5/16 mounting bolt, 2x, VIBREX instructions
 VIB 9.610.G VIBREX instructions

Scope of delivery VIB 5.762 IX:

VIB 3.550 PRÜFTECHNIK current limiting device, 2x
 VIB 5.750 VIBREX basic unit
 VIB 5.755 I Vibration module (10 Hz...1 kHz, ISO), 2x
 VIB 5.771 Cable, TNC, 3 meters, 2x
 VIB 6.122DEX* Industrial accelerometer with M8 mounting bolt, intrinsically safe, 2x, or
 VIB 6.102DEX* Industrial accelerometer with adhesive base, intrinsically safe, 2x
 VIB 9.610.G VIBREX instructions

Scope of delivery VIB 5.762 ICP:

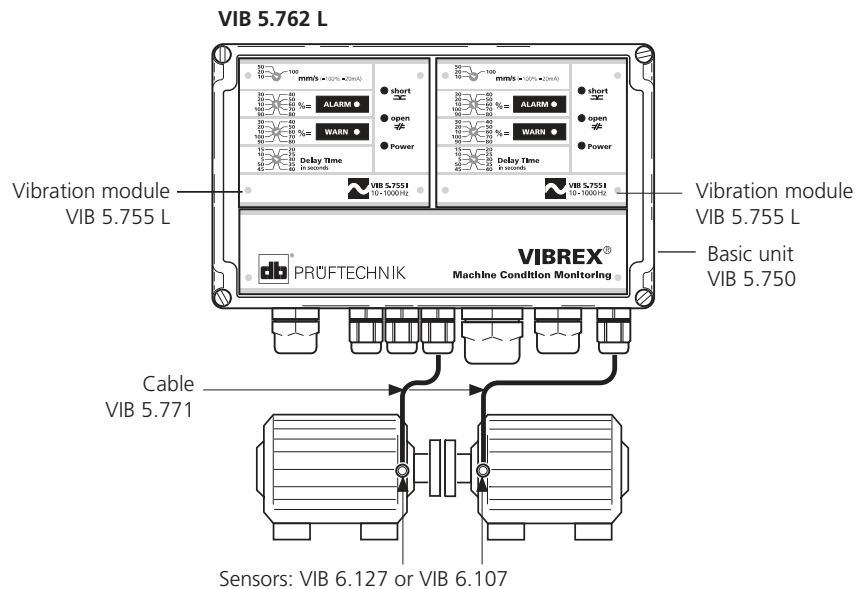
VIB 5.753 VIBREX ICP basic unit
 VIB 5.755 ICP ICP Vibration module (10 Hz ... 1 kHz), 2x
 VIB 9.610.G VIBREX instructions

* When ordering, please specify the required sensor.
 Other sensor types and cable lengths are available at a surcharge

VIBREX vibration monitoring for low-speed machines, 2 channels

VIB 5.762 L : VIBREX vibration monitoring for low-speed machines (> 60 rpm), 2 channels

VIB 5.762 ML : VIBREX vibration monitoring for low-speed machines (> 120 rpm), 2 channels



Description

The VIBREX package **VIB 5.762 L** is used for vibration monitoring on very low-speed machines such as cooling tower fans, mixers, stirrers, etc.

The VIBREX package **VIB 5.762 ML** is used for vibration monitoring on medium-speed and low-speed machines (> 120 rpm) acc. to ISO 10816-3.

Scope of delivery **VIB 5.762 L**:

VIB 5.750	VIBREX basic unit
VIB 5.755 L	Vibration module (1 Hz...1 kHz), 2x
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.127*	Industrial accelerometer for low-speed machines, M8 mounting bolt, 2x, <u>or</u>
VIB 6.107*	Industrial accelerometer for low-speed machines, adhesive base, 2x
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.762 ML**:

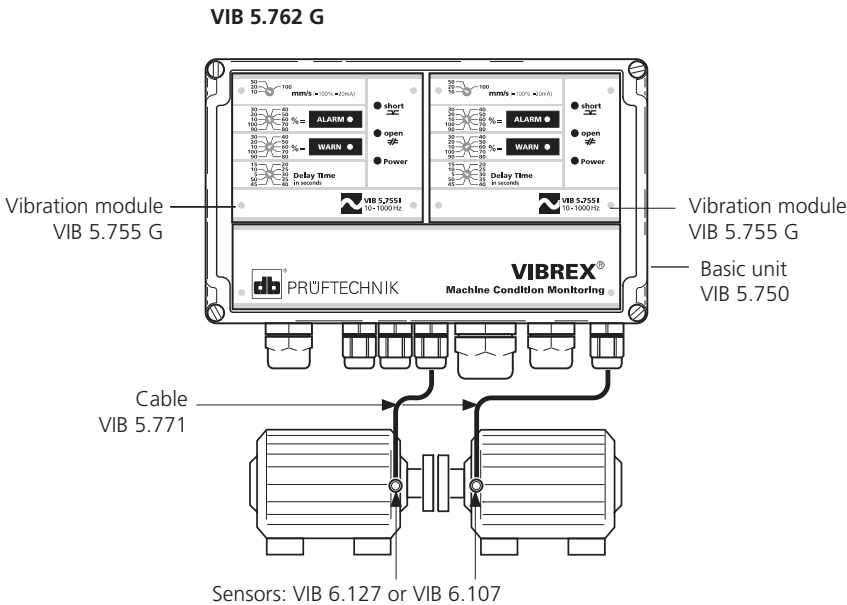
VIB 5.750	VIBREX basic unit
VIB 5.755 ML	Vibration module (2 Hz...1 kHz), 2x
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, 2x, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base, 2x
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIBREX vibration monitoring for gearboxes, 2 channels

- 1
- VIB 5.762 G : VIBREX vibration monitoring for gearboxes (> 60 rpm), 2 channels
- VIB 5.762 GF : VIBREX vibration monitoring for gearboxes (> 120 rpm), 2 channels

2



Description

The VIBREX package **VIB 5.762 G** is used for vibration monitoring on low-speed gearboxes (> 60 rpm).

The VIBREX package **VIB 5.762 GF** is used for vibration monitoring on medium-speed gearboxes (> 120 rpm).

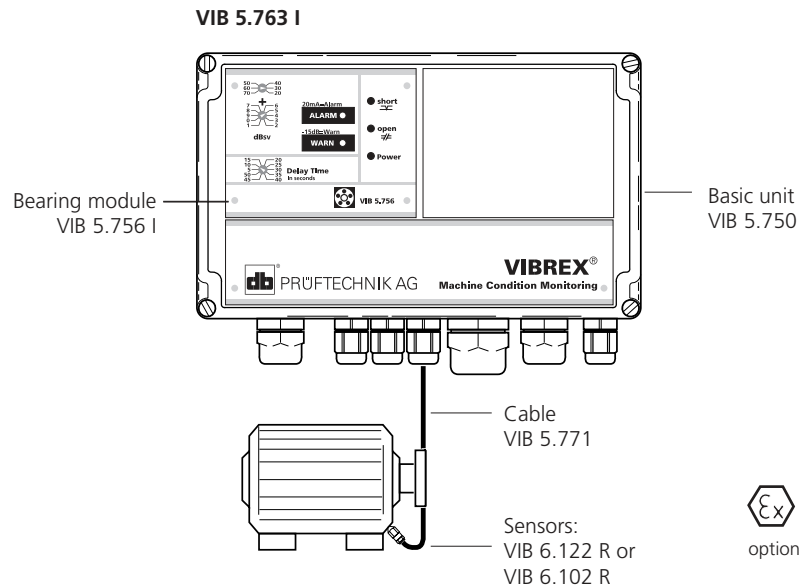
- Scope of delivery **VIB 5.762 G**:
- VIB 5.750 VIBREX basic unit
 - VIB 5.755 G Vibration module (1 Hz...1 kHz), 2x
 - VIB 5.771 Cable, TNC, 3 meters, 2x
 - VIB 6.127* Industrial accelerometer for low-speed machines, M8 mounting bolt, 2x, or
 - VIB 6.107* Industrial accelerometer for low-speed machines, adhesive base, 2x
 - VIB 9.610.G VIBREX instructions
- Scope of delivery **VIB 5.762 GF**:
- VIB 5.750 VIBREX basic unit
 - VIB 5.755 GF Vibration module (2 Hz...1 kHz), 2x
 - VIB 5.771 Cable, TNC, 3 meters, 2x
 - VIB 6.122 R* Industrial accelerometer for standard machines, M8 mounting bolt, 2x, or
 - VIB 6.102 R* Industrial accelerometer for standard machines, adhesive base, 2x
 - VIB 9.610.G VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIBREX bearing condition monitoring, 1 channel

VIB 5.763 I : VIBREX bearing condition monitoring, standard version, 1 channel

VIB 5.763 IX : VIBREX bearing condition monitoring, intrinsic safety, 1 channel



Description

The VIBREX package **VIB 5.763 I** is used for bearing condition monitoring.

The VIBREX package **VIB 5.763 IX** contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensor within the intrinsically safe area via the PRÜFTECHNIK current limiting device (VIB 3.550).

Scope of delivery **VIB 5.763 I**:

VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.763 IX**:

VIB 3.550	PRÜFTECHNIK current limiting device
VIB 5.750	VIBREX basic unit
VIB 5.754	Empty module
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122DEX*	Industrial accelerometer with M8 mounting bolt, intrinsically safe <u>or</u>
VIB 6.102DEX*	Industrial accelerometer with adhesive base, intrinsically safe
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

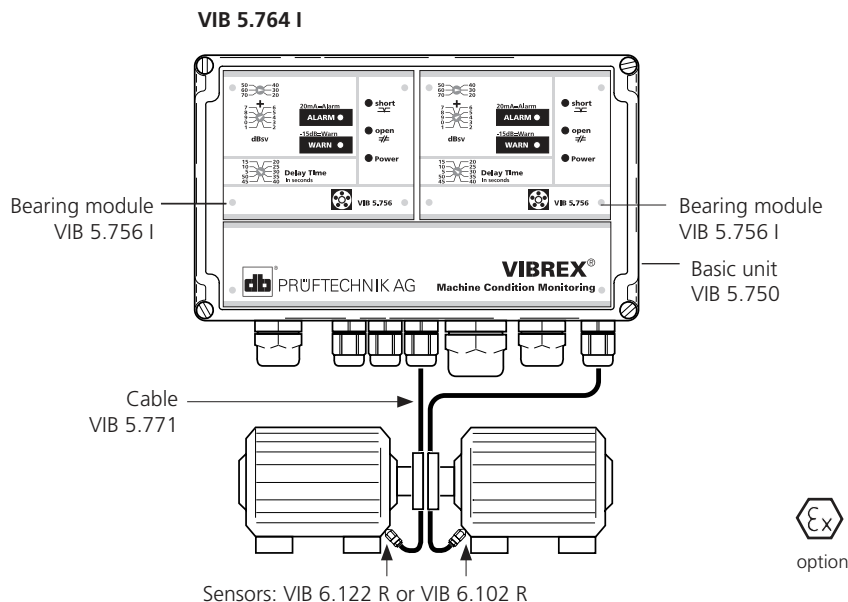
VIBREX bearing condition monitoring, 2 channels

1

VIB 5.764 I : VIBREX bearing condition monitoring, standard version, 2 channels

VIB 5.764 IX : VIBREX bearing condition monitoring, intrinsic safety, 2 channels

2



Description

The VIBREX package **VIB 5.764 I** is used for bearing condition monitoring.

The VIBREX package **VIB 5.764 IX** contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensors within the intrinsically safe area via the PRÜFTECHNIK current limiting devices (VIB 3.550).

Scope of delivery **VIB 5.764 I:**

VIB 5.750	VIBREX basic unit
VIB 5.756 I	Bearing module, 2x
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.122 R*	Industrial accelerometer with M8 mounting bolt, 2x, <u>or</u>
VIB 6.102 R*	Industrial accelerometer with adhesive base, 2x
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.764 IX:**

VIB 3.550	PRÜFTECHNIK current limiting device, 2x
VIB 5.750	VIBREX basic unit
VIB 5.756 I	Bearing module, 2x
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.122DEX*	Industrial accelerometer with M8 mounting bolt, intrinsically safe, 2x, <u>or</u>
VIB 6.102DEX*	Industrial accelerometer with adhesive base, intrinsically safe, 2x
VIB 9.610.G	VIBREX instructions

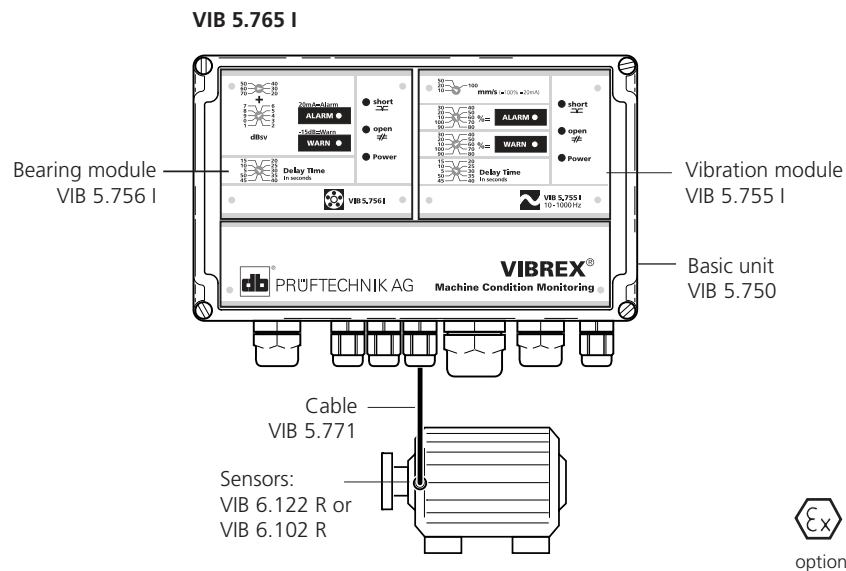
* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

Combined VIBREX bearing and ISO vibration monitoring, 1 channel

VIB 5.765 I : Combined VIBREX bearing and ISO vibration monitoring, 1 channel, standard version

VIB 5.765 IUS : Combined VIBREX bearing and ISO vibration monitoring, 1 channel, U.S. version

VIB 5.765 IX : Combined VIBREX bearing and ISO vibration monitoring, 1 channel, intrinsic safety



Description

The VIBREX package **VIB 5.765 I** is used to monitor both bearing condition and ISO vibration severity using only one sensor. The U.S. package **VIB 5.765 IUS** provides imperial units.

The VIBREX package **VIB 5.765 IX** contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensor within the intrinsically safe area via the PRÜFTECHNIK current limiting device (VIB 3.550).

Scope of delivery **VIB 5.765 IUS**:

VIB 5.750	VIBREX basic unit
VIB 5.755 IUS	Vibration module, U.S. version (10 Hz...1 kHz, ISO)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.132 R	Industrial accelerometer for standard machines, UNC 5/16" mounting bolt
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.765 I**:

VIB 5.750	VIBREX basic unit
VIB 5.755 I	Vibration module (1 Hz...1 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.765 IX**:

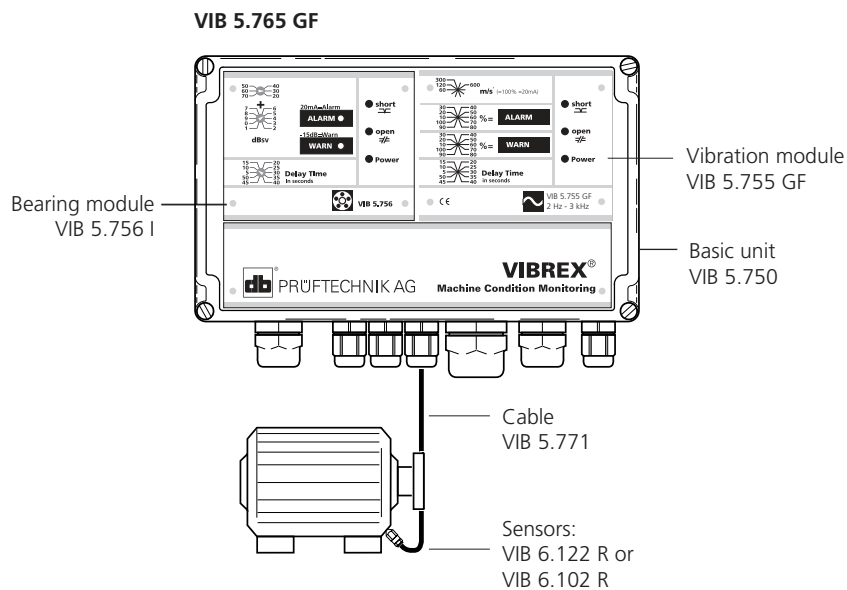
VIB 3.550	PRÜFTECHNIK current limiting device
VIB 5.750	VIBREX basic unit
VIB 5.755 I	Vibration module (1 Hz...1 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122DEX*	Industrial accelerometer with M8 mounting bolt, intrinsically safe <u>or</u>
VIB 6.102DEX*	Industrial accelerometer with adhesive base, intrinsically safe
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIB 5.765 GF : Combined VIBREX bearing and ISO vibration monitoring for gearboxes, 1 channel

1

2



Description

The VIBREX package **VIB 5.765 GF** is used to monitor both bearing condition and vibration on medium-speed gear stages (> 120 rpm) using only one sensor.

Scope of delivery **VIB 5.765 GF**:

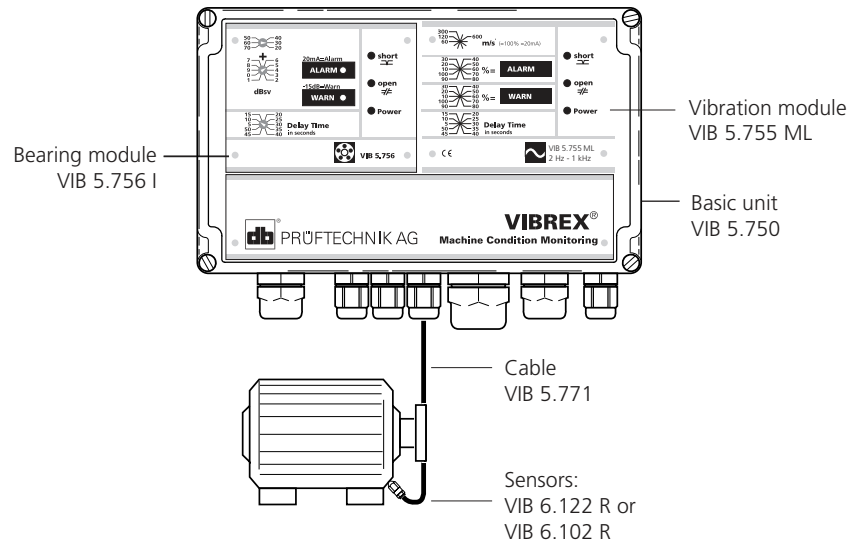
VIB 5.750	VIBREX basic unit
VIB 5.755 GF	Vibration module (2 Hz...3 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIB 5.765 ML : Combined VIBREX bearing and ISO vibration monitoring for low-speed machines, 1 channel



VIB 5.765 ML



Description

The VIBREX package **VIB 5.765 ML** is used to monitor both bearing condition and ISO vibration severity on medium-speed machines (> 120 rpm) using only one sensor.

Scope of delivery **VIB 5.765 ML**:

VIB 5.750	VIBREX basic unit
VIB 5.755 ML	Vibration module (2 Hz...1 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base
VIB 9.610.G	VIBREX instructions

* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge

VIBREX bearing condition and vibration monitoring acc. to ISO standards, 2 channels

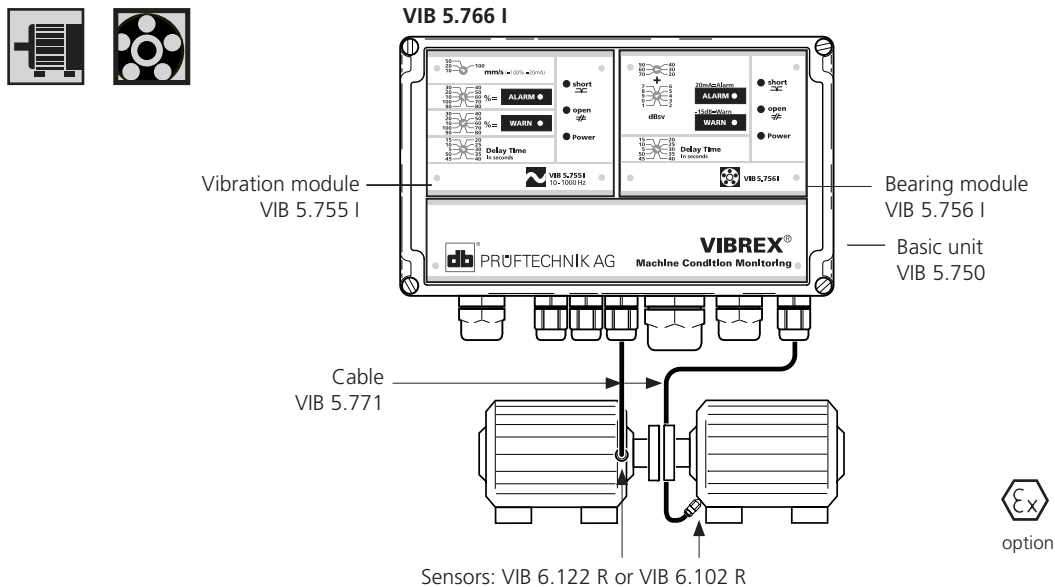
1

VIB 5.766 I : VIBREX bearing condition and vibration monitoring acc. to ISO standards, 2 channels, standard version

VIB 5.766 IUS : VIBREX bearing condition and vibration monitoring acc. to ISO standards, 2 channels, U.S. version

VIB 5.766 IX : VIBREX bearing condition and vibration monitoring acc. to ISO standards, 2 channels, intrinsic safety

2



Description

The VIBREX 2-channel package **VIB 5.766 I** is used to monitor both ISO vibration severity and bearing condition at two separate measurement locations. The U.S. package **VIB 5.766 IUS** provides imperial units.

The VIBREX package **VIB 5.765 IX** contains the required components for use in hazardous environments. The VIBREX basic unit is mounted outside the intrinsically safe area and connected to the sensors within the intrinsically safe area via the PRÜFTECHNIK current limiting devices (VIB 3.550).

The sensor types can be combined (e.g. VIB 6.122 R and VIB 6.102 R).

Scope of delivery **VIB 5.766 I**:

VIB 5.750	VIBREX basic unit
VIB 5.755 I	Vibration module (1 Hz...1 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.122 R*	Industrial accelerometer for standard machines, M8 mounting bolt, 1x/2x <u>and/</u> <u>or</u>
VIB 6.102 R*	Industrial accelerometer for standard machines, adhesive base, 1x/2x
VIB 9.610.G	VIBREX instructions

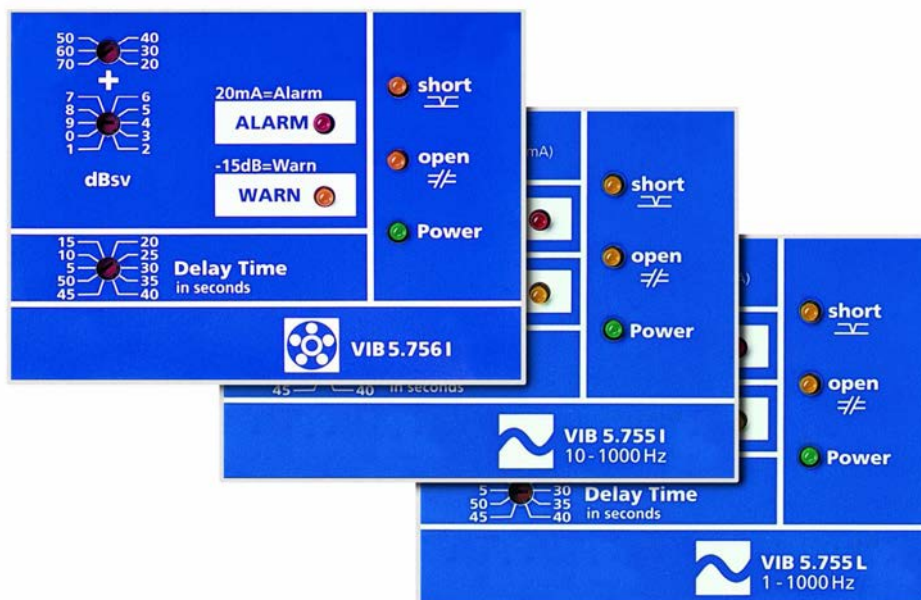
Scope of delivery **VIB 5.766 IUS**:

VIB 5.750	VIBREX basic unit
VIB 5.755 IUS	Vibration module, U.S. version (10 Hz...1 kHz, ISO)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.132 R	Industrial accelerometer for standard machines, UNC 5/16" mounting bolt, 2x
VIB 9.610.G	VIBREX instructions

Scope of delivery **VIB 5.766 IX**:

VIB 3.550	PRÜFTECHNIK current limiting device, 2x
VIB 5.750	VIBREX basic unit
VIB 5.755 I	Vibration module (1 Hz...1 kHz)
VIB 5.756 I	Bearing module
VIB 5.771	Cable, TNC, 3 meters, 2x
VIB 6.122DEX*	Industrial accelerometer with M8 mounting bolt, intrinsically safe 1x/2x <u>and/</u> <u>or</u>
VIB 6.102DEX*	Industrial accelerometer with adhesive base, intrinsically safe, 1x/2x
VIB 9.610.G	VIBREX instructions

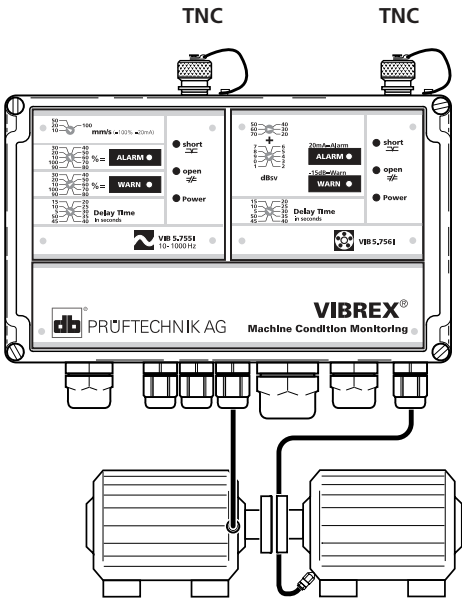
* When ordering, please specify the required sensor.
Other sensor types and cable lengths are available at a surcharge



VIB 5.790 : VIBREX basic unit with signal output (mV)

1

2



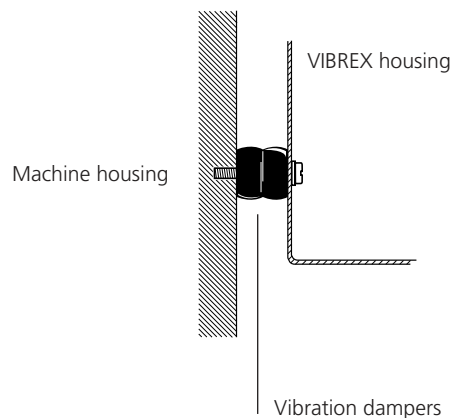
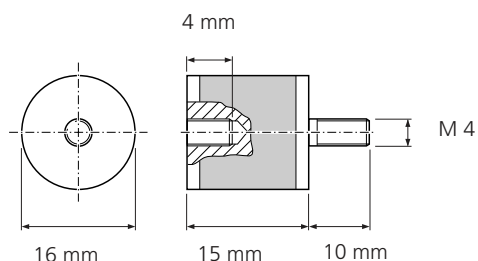
Description

VIBREX is also available with optional separate mV outputs for each module. This output allows, for example, analysis of measurement signals or checking of sensor function. The signal is output via the TNC plug located on top of the corresponding module.

Ordering notes

This order number must be added to the regular VIBREX order number in order to obtain the mV output version.
Example: 2-channel vibration monitoring (ISO) with mV output would be ordered as: VIB 5.762 I / VIB 5.790
The VIBREX packages for ICP-type sensors (VIB 5.761 ICP and VIB 5.762 ICP) are equipped with a mV output by default.

PARAMETER		VIB 5.790
Measurement	Output	direct sensor signal (from HW version 2.10 buffered, 100 Ohm)
	Transmission, LineDrive (1µA/ms ²)	1.0 mV/ms ² (= 9,8 mV/g)
	Transmission, LineDrive (5.35 µA/ms ²)	5.35 mV/ms ² (= 52 mV/g)
	Transmission, ICP	10.2 mV/ms ² (= 100 mV/g)
	Frequency response	corresponds to sensor

VIB 5.751 SET : VIBREX mounting kit**Description**

The VIBREX housing can be mounted either on a stable, vibration-free wall or attached directly to the machine housing.

If it is mounted on the machine housing, VIBREX must be mounted with vibration dampers to avoid damage from knocks and vibration.

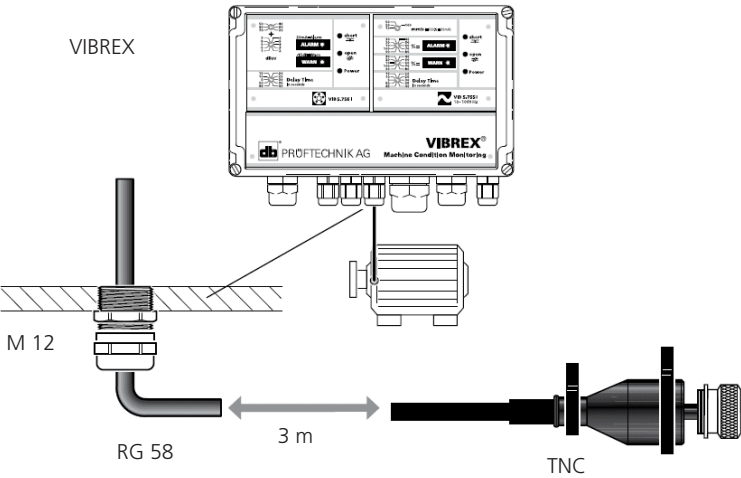
These small parts and the screws required are included in the VIBREX assembly set (VIB 5.751 SET).

Commercial bolts and screws are required for the wall mounting. These small parts are not included in the VIBREX assembly set (VIB 5.751 SET) nor are they contained in the basic packages.

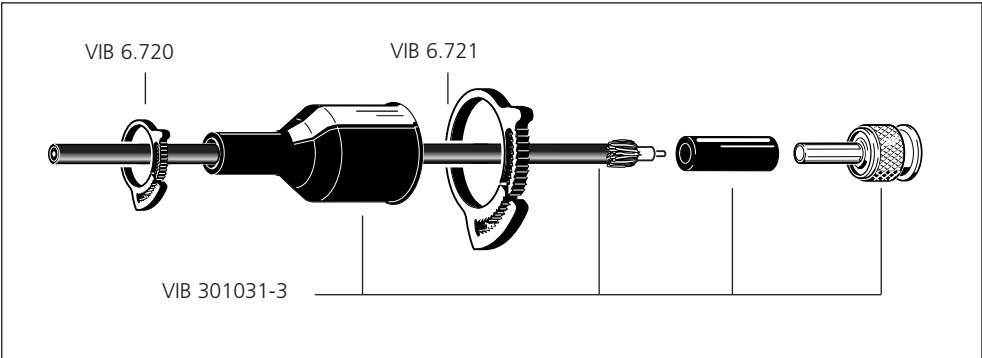
VIB 5.771 : VIBREX sensor cable, 3 meters long

1

2



VIB 5.771 =

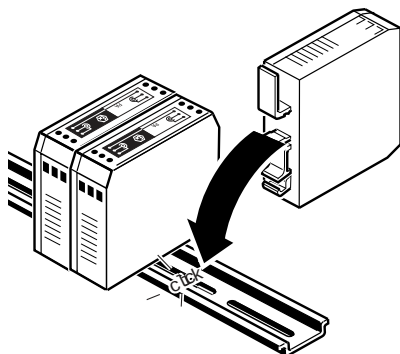


Description

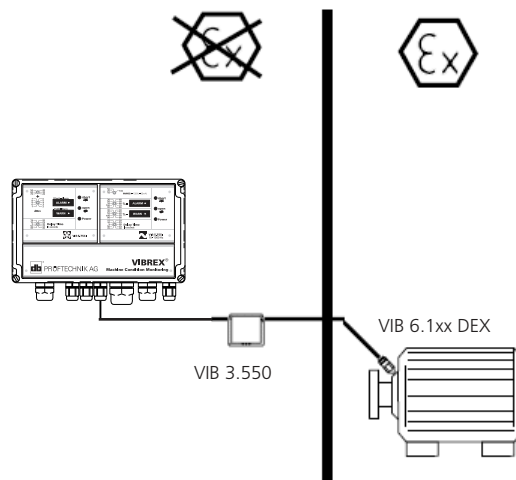
Standard cable for the connection of an industrial accelerometer to VIBREX.

PARAMETER		VIB 5.771
General	Cable type	Coaxial (RG 58)
	Length	3 meters
	Connector	Sensor side: TNC plug VIBREX side: open end

VIB 3.550 : PRÜFTECHNIK limiting device for hazardous areas



CE 0044



Application

The PRÜFTECHNIK limiting device VIB 3.550 is necessary for the safe operation of Current LineDrive accelerometers (type: 6.1xx DEX) mounted in a hazardous area.

The limiting device VIB 3.550 separates an intrinsically safe circuit from a non-intrinsically safe circuit. The limiting device limits the current and the voltage in the intrinsically safe sensor circuit.

Notes

The EC type-examination certificate TÜV 02 ATEX 1849 must be observed.

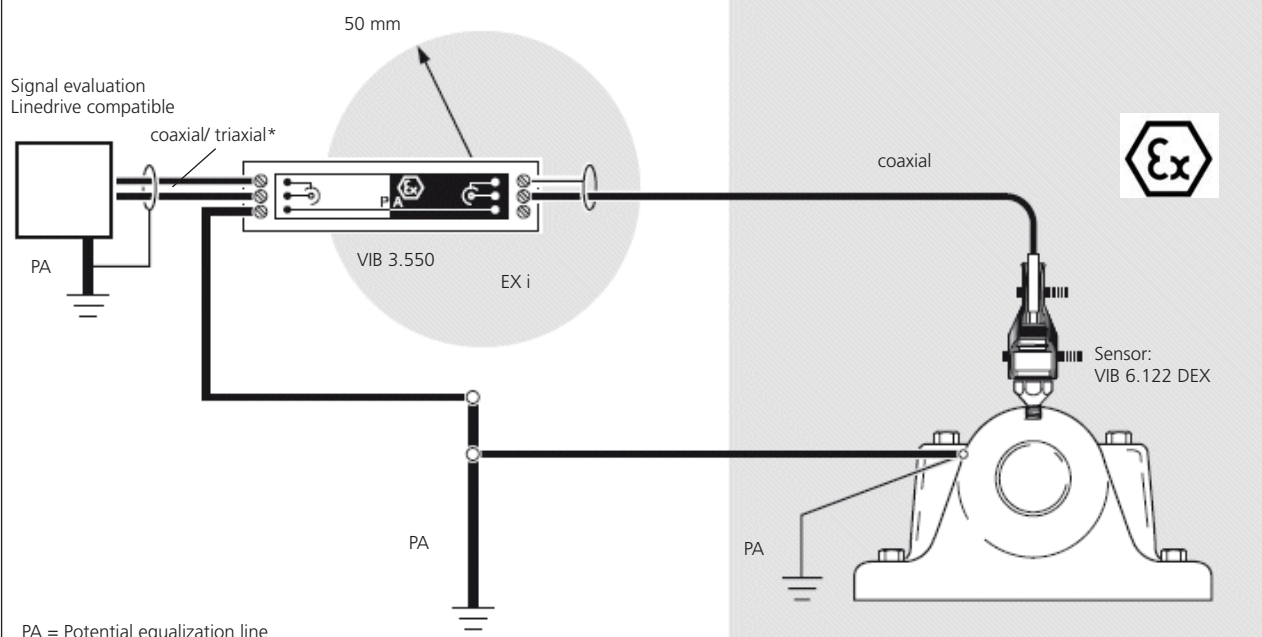
In particular the european installation instructions (EN 60079-14:1997 and EN 61241-14:2004) and the installations notes for hazardous areas in the PRÜFTECHNIK catalog ,Sensors, cables and accessories - LIT 01.700.EN must be followed.

Technical data

PARAMETER		VIB 3.550
Electrical	Nominal supply U_n	12V DC ($\pm 10\%$)
	Current drain	3.5mA DC + AC Signal
	Signal	Current Linedrive (e.g. $1\mu A/ms^2$)
	Accuracy	Signal sensor accuracy
	Non-intrinsically safe circuit (terminals IN+ IN- PA1)	$U_m = 250$ V AC
	Intrinsically safe circuit (terminals OUT+ OUT- PA2)	in type of protection Intrinsic Safety EEx ib IIC Maximum values: $U_0 = 13$ V $I_0 = 18$ mA $P_0 = 240$ mW $C_0 = 300$ nF $L_0 = 1$ mH
General	Ambient temperature, T_A	$-10^\circ\text{C} \dots +50^\circ\text{C}$
	Case material	PA6.6, green
	Environmental protection	IP 20
	Dimensions (HxWxT)	85 x 79 x 22.5 mm
EX	Intrinsic safety	II (2) G [EEx ib] IIC

1

2

Connection example for limiting device VIB 3.550

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PRÜFTECHNIK

Productive maintenance technology