



HAUBER-Elektronik

Product overview

Condition monitoring

Mechanical protection in compliance with DIN ISO 10816

History

01/07/1966

Foundation

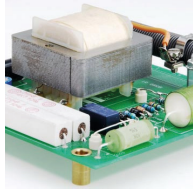
01/07/1966 - Foundation of the company in the HAUBER bakery at Paulinenstr. 14 in Nürtingen, Germany.



1971

Type 031

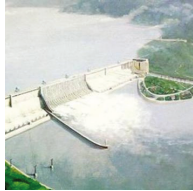
Short-circuit signalling relay for Deutsche Bundesbahn.



1995

Type VCA3

Control chart for water turbines. The Three Gorges Dam on the Yangtze River in China.



2005

Company founder appoints Mr Tobias Bronkal as his successor

Type 640 - The first vibration transmitter at HAUBER-Elektronik.



2007

Type 663

The first vibration control to feature SIL2 approval.



2015

The laboratory is expanded with the addition of a new shaker system.



1970

Mars Elektronik

MARS Incorporated, the maker of chocolate bars, purchases the "MARS-Elektronik" company name. New company name: HAUBER-Elektronik GmbH.



1972

Type 068

The first vibration threshold value switch, which we invented at the suggestion of the Daimler-Benz company.



2002

LED lights

Illumination of production goods.



2006

The first explosion-proof vibration control.



2011

Certification by HAUBER-Elektronik: ISO 9001:2008.



2017

A new HE100 vibration control is introduced.



HE100 / HE101 Series vibration control

This model series of extremely reliable vibration controls comes in a high-quality stainless steel design. To offer reliable protection and monitoring of rotating machinery, we offer this vibration control in various frequency and measurement ranges. In addition to this, there are various ATEX versions available.

EAC
CE



Standard version

Ex
EAC
EAC Ex
CE



ATEX version

ATEX version

Zone 1 / 21 / 2 / 22

Pressure-resistant casing, Ex d

Protection through housing, Ex tb



II 2 G Ex d IIC T4 Gb

II 2 D Ex tb IIIC T120 °C Db

Intrinsic safety Ex ib (HE100)



II 2 G Ex ib IIC T4 Gb

II 2 D Ex ib IIIC T125 °C Db

HE100 Series

Vibration velocity

Analogue output

1 - 1000 Hz / 10 - 1000 Hz

The HE100 Series vibration control is used to measure and monitor absolute bearing vibrations in machines in line with DIN ISO 10816.

Features:

- Operating principle: two-wire system.
- Measurement value: effective value (rms) of the vibration velocity in mm/s, in compliance with DIN ISO 2954.
- Analogue current output: interference-free DC signals from 4...20 mA, proportional to the measuring range of the vibration control.

HE101 Series

Vibration velocity

Temperature measurement

Analogue output

1 - 1000 Hz / 10 - 1000 Hz

The HE101 Series vibration control is used to measure and monitor absolute bearing vibrations and bearing temperatures in machines in line with DIN ISO 10816.

Features

- Measurement value: effective value (rms) of the vibration velocity in mm/s, in compliance with DIN ISO 2954.
- Measurement value: temperature in °C.
- Two analogue current outputs: interference-free DC signals from 4...20 mA, proportional to the measuring range of the vibration and temperature control.

663 Series vibration control

This compact vibration control meets all SIL2 and SIL3 safety and integrity requirements and is the ideal electronic monitoring system to provide high levels of mechanical safety. The HAUBER-Elektronik 663 Series came onto the market as one of the first SIL2-capable vibration controls and is now in use in thousands of applications.



Standard version



ATEX version

ATEX version

Zone 1 / 21

- II 2 G Ex d IIC T4 Gb
- II 2 D Ex tb IIIC T120 °C Db

Zone 2 / 22

- II 3 G Ex d nA IIC T4 Gc
- II 3 D Ex tc IIIC T120 °C Dc

663 Series

Vibration velocity

Analogue and switching output

1 - 1000 Hz / 10 - 1000 Hz

The Series 663 vibration control is used to measure and monitor absolute bearing vibrations in machines in line with DIN ISO 10816.

Features

- Measurement value: effective value (rms) of the vibration velocity in mm/s.
- Two limit values and associated delay times are separately adjustable.
- Each of the two relay outputs gives a signal if the corresponding set limit values are exceeded. This can be used to generate a preliminary and a main alarm.
- Analogue current output: interference-free DC signals from 4...20 mA, proportional to the measuring range of the vibration control.

663 Window Series

Vibration acceleration

Analogue and switching output

1 - 1000 Hz / 10 - 1000 Hz

The Type 663-Window vibration control is used to measure and monitor vibration acceleration on machines.

Features

- Measurement value: vibration acceleration (g, peak).
- Two limit values and associated delay times are separately adjustable.
- Both relay switching outputs give a signal if the set window range is exceeded or undershot. This can be used to generate an alarm.
- Analogue current output: Interference-free DC signal from 4...20 mA, proportional to the measuring range of the vibration control.

650 / 652 Series electronic evaluation device

In addition to its vibration controls, HAUBER-Elektronik also supplies various electronic evaluation devices (650 /652 Series). The analogue signals of our vibration controls are laid down here and are combined to create stand-alone machine protection systems.

After the limit value has been exceeded and the fully adjustable time limit has expired the respective relay drops out. In addition to this, the two input signals are monitored for cable breaks and the status is issued via an OK relay.

This series with its easy-to-read display is the ideal complement to our vibration monitoring systems.



650 Series

Suitable for HE101

Measurement channels 1

Pre- and main alarm

Display

The Series 650 electronic evaluation device is used to detect and monitor the output currents (4...20 mA) of the Type HE101 vibration control.

The electronic evaluation device is contained in a 20-pole DIN rail housing. This can be mounted using either a top hat rail or directly on the wall.



652 Series

Suitable for HE100

Measurement channels 2

Pre- and main alarm

Display

The 652 Series electronic evaluation device is used to detect and monitor the output current (4...20 mA) of one or two Type HE100 vibration control (s).

The electronic evaluation device is contained in a 20-pole DIN rail housing. This can be mounted using either a top hat rail or directly on the wall.

Electronic evaluation device



656 Series

Suitable for HE100

Measurement channels 1

Main alarm

The 656 Series electronic evaluation device is designed for top hat rail mounting.

The limit value is monitored together with a fully adjustable delay. This series also has OK monitoring. HE100 Series vibration controls can be connected. It has wide-ranging applications: all rotating machines which require economical limit value monitoring.



400 Series

Suitable for HE100

Measurement channels 1

Portable measuring device

A portable measuring device belongs in the portfolio of a well-rounded vibration measuring technology system.

The 400 Series measuring device from HAUBER-Elektronik represents the effective value of the vibration velocity. HE100 Series vibration controls can be connected. This means that overall vibration from 1 Hz or 10 Hz up to 1000 Hz can be measured.

The battery-operated device is very simple to use and gives the user a quick overview of the status of his machines which can be evaluated by using guidelines.

Product accessories

When it comes to the professional and industry-compatible installation of vibration controls and electronic evaluation devices, you will find everything you need for your particular application at HAUBER-Elektronik: cables, plug connectors, installation adapters and magnets for mobile use.



Sensor cable

High-quality shielded sensor cable for safe use in industrial environments.



Connector

High-quality plug connection for safe use in industrial environments. Available in a variety of versions to suit particular applications.



Metallic protective hose

Perfect protection for the sensor cable for the harshest industrial environments.



Metal protective hose with adaptation

Perfect protection for the sensor cable including sensor adaptation for the harshest industrial environments. Seamless protection of the sensor cable. This metal protector is suitable for HE100 & HE101 sensors.

Product accessories



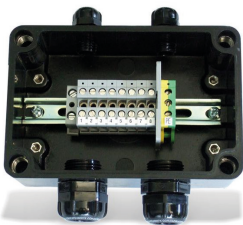
Mounting accessories

Metric threads and inch threads are available depending on requirements and customer preferences. For mobile measurements, we offer a magnet with a high pulling capacity. In addition to this, an EMC adapter for insulating the sensor housing from the machine potential is also available.



Rubber nozzle

The rubber nozzle protects the sensor as well as the cable connection against mechanical effects and prevents the ingress of moisture. The rubber nozzle is recommended particularly when the sensors are used outdoors.



Terminal box

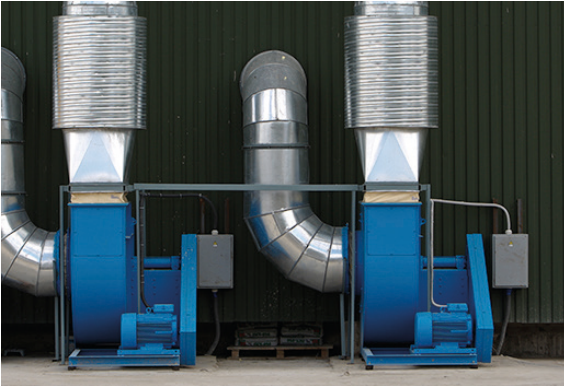
High-quality terminal boxes are a reliable means of transmitting signals to higher-level controllers. The focus in this case is on flexibility and the desired customer requirements.



ATEX isolating amplifier

The feed/isolating amplifier is used to safely operate the HE100 vibration control with the Ex i type of protection. It transmits signals from the potentially explosive area to the safe area.

Fields of application



Fans

Fans are used successfully in almost all sectors of industry. Status monitoring helps to prevent faults such as imbalances or misalignments, identify wear processes early and make optimal use of the lifespan of components.



Centrifuges

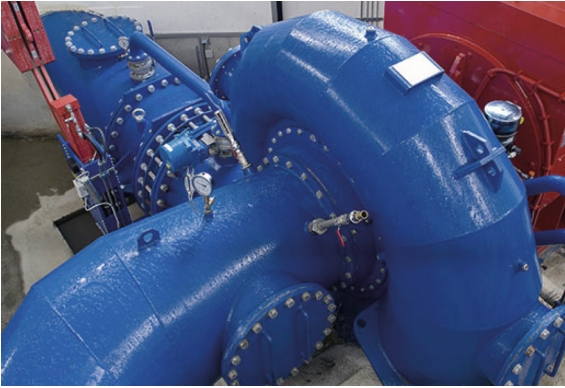
These systems are an integral part of the processes of many sectors of industry. Both status monitoring and personal protection play a central part in this. It is here that vibration monitoring systems with SIL/PL-d authorisations are particularly applicable.



Vibrating troughs

Conveyor technology is the focus here. Vibration measurement technology helps to detect both increased and insufficient levels of vibration. Special vibration monitoring systems are available for this, such as Type 663-WINDOW.

Fields of application



Turbines

Turbines and generators have their application in the chemical, oil & gas or paper industries. Measurement of housing vibration is a typical process and a sound measure in status monitoring that is indispensable for the system operator.



Mills

Mills are an important element in the cement industry, for instance. System components that are vital to production can be permanently monitored for vibration. This increases process safety, product quality and plant availability in a cement works.



Pumps

Pumps are indispensable for conveying liquid or solid media, making them a permanent feature of any industry. Vibration monitoring is the means of helping the system operator to achieve functional status monitoring.

Notes



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