

# Vibration Control Type 674



**Standard**

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**Instruction Manual**

**English**

# Instruction Manual

## Vibration Control Type 674

Standard

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### **Attention!**

Before Start-Up Procedure the Instruction Manual must be read and understood!

Should any question arise, please contact:

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# 1 Safety Instructions

## In General

*The safety instructions serve the protection of persons and things from damage and danger that arise from not intended use and further misuse of products especially in explosion endangered areas. Therefore read the instruction manual carefully, before working with or starting-up the product. To the operating personnel the instruction manual has to be accessible anytime.*

Before the starting-up or miscellaneous works with the product please check, whether all the documents are available completely. If not all the documents are committed completely or further copies are required, they can be obtained in different languages.

Our product is designed to the latest state of the art. Nevertheless there are a number of residual risks. This means that each person in the operators firm, concerned with mounting and dismounting, installation, start-up, operating or maintenance of the product, has to have read and understood the instruction manual.

This means furthermore that each person in the operators firm, concerned with mounting and dismounting, installation, start-up, operating or maintenance of the product, has to be an authorized expert, familiar with the safety instructions for handling electrical components. For handling ATEX-certified products within explosion endangered surroundings the expert in addition has to be familiar with the safety instructions relevant there.

## Used Symbols



This symbol indicates an explosion hazard.



This symbol indicates a risk from electrical current.



This symbol indicates a (non-safety relevant) information.

## 2 Instruction Manual Scope

The present instruction manual of the Vibration Control Type 674 is applicable for the variant: Standard.

## 3 The Vibration Control Type 674 Standard

The Vibration Control Type 674 ist applied for measurement of machines absolute bearing vibration, referring to DIN ISO 10816. The Measurement parameter is the root mean square (rms) of the vibration velocity, the unit is mm/s. The Control is equipped with two switching outputs. After reaching a pre-set switching threshold and a pre-set delay the outputs switch from 24 V to 0 V (GND).

## 4 Intended Use

The Type 674 exclusively serves for the measurement of mechanical vibrations of machines and mechanical facilities. The operation is valid exclusively within the specifications mentioned in this manual. **Main areas of application:** Industrial fans, ventilators, blowers, electric motors, pumps, centrifuges, seperators, generators, turbines, and similar, oscillatory mechanical equipment.

## 5 Documents and Certificates

Following Type 674 Document can be consulted on [www.hauber-elektronik.de](http://www.hauber-elektronik.de):

- EC-Conformity-Declaration

## 6 Application Fields

Variant	Application Fields	Labelling
Standard	None explosion endangered Areas	none

## 7 Delivery Contents

Variant	Delivery Contents
Standard	<ul style="list-style-type: none"> <li>• Vibration Control Type 674</li> <li>• Instruction Manual</li> </ul>
Available Supplies	<ul style="list-style-type: none"> <li>• Various Adapters, e.g. M8 -&gt; M10</li> <li>• Allocable Mating Connector</li> <li>• Connection Cable, M12-Socket, 4-pole, 0,34 mm<sup>2</sup></li> <li>• L= 2 m, 5 m or 10 m or on request</li> <li>• Magnet Foot</li> </ul>

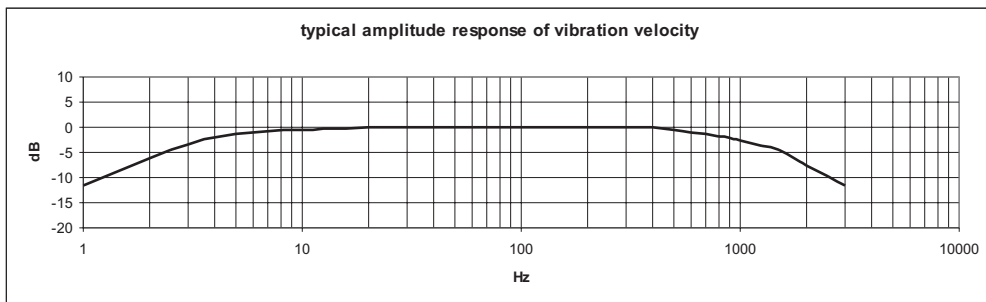
## 8 Electrical Data



Before Starting-Up the Control, the voltage supply must be secured with a microfuse (time delay; 1,25 A; breaking capacity C)!

Switching-Signal Outputs:	2 x Transistor-Switching-Contact, short-circuit proof, 24 V DC, $I_{max} = 0,5 A$
Switching States:	24 V DC      a) Switching Threshold not exceeded b) Switching Threshold exceeded and delay not expired  0 V / GND      Switching Threshold exceeded and delay expired
Switching Threshold 1 and 2:	To be defined by the customer within the wished measuring range.  <i>Example: Measuring Range: 0...16 mm/s                  Switching Threshold 1: 5 mm/s,                  Switching Threshold 2: 10 mm/s</i>
Delay 1 and 2:	To be defined by the customer.  <i>Example: Delay 1: 5 s                  Delay 2: 10 s</i>
Measuring accuracy:	$\pm 5\%$
Frequency range:	10 Hz...1000 Hz
Voltage supply:	24V DC $\pm 10\%$
Power input (max.):	1,05 A
Shock (max.):	1000 g
Burden/Load:	500 $\Omega$
Fusing:	Microfuse (Time delay; 1,25 A; breaking capacity C)
Ambient Temperature (max.):	-20° C...+60° C
Measuring-head Temperature at the fixing (max.):	-40° C...+85° C optional: -40° C...+125° C

## Frequency Response - 10 Hz...1000 Hz



## 9 Mechanical Data

Housing Material:

M12-connector / cable gland:

Fastening:

Securing:

Weight:

Protection Style:

Stainless Steel V2A; material no: 1.4305

CuZn (brass), nickel plated

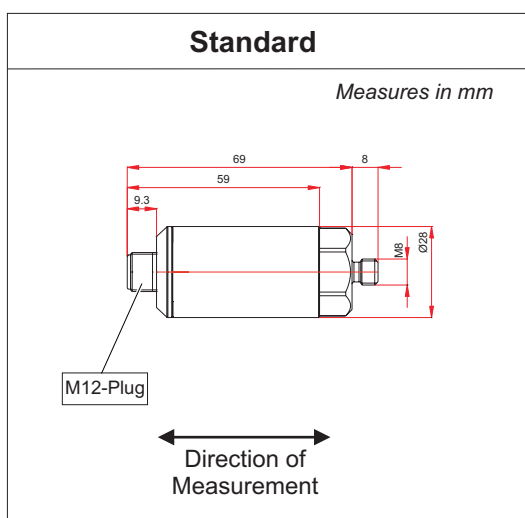
Wrench Size: 24 (hexagon), M8 x 8

The housing must be earthed via the M8 fastening (see chapt.11).

ca. 150 g

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## Housing Dimensions and Direction of Measurement



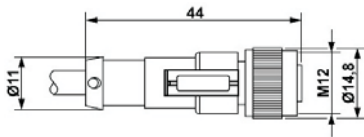
*Housing Dimensions and Direction of Measurement: Standard*



**Note:** Direction of Measurement = Direction of Fastening

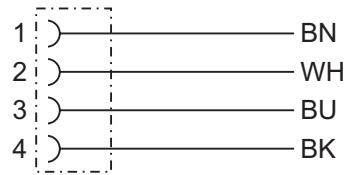
## 10 Connections

### Connection Cable Socket (Supplies)



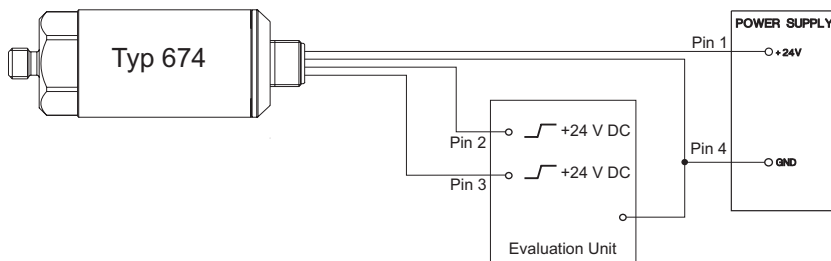
Connection Cable Socket, M12, 4-pol.,  
0,34 mm<sup>2</sup>

### Connection Cable (Supplies)





PUR-sheathed-cable, 4-pole, 0,34 mm<sup>2</sup>,  
L = 2 m (Standard)

### Connection Plan



Connection Plan: Type 674 with Evaluation Unit and Power Supply

### Pin Assignment

Pin	Assignment	Signal
1	Power Supply	+24 V DC
2	Switching-Sig.-Output 2	 +24 V DC
3	Switching-Sig.-Output 1	 +24 V DC
4	GND	0 V

Pin Assignment: Pin-Numbers, Assignment and Signals

## 11 Mounting and Dismounting

Mounting and Dismounting works at and with the Control may only be executed by an authorized expert, familiar with the safety instructions for handling electrical components. For handling ATEX-certified Controls within explosion endangered surroundings the expert in addition has to be familiar with the safety instructions relevant there.



Before mounting and dismounting works the Control has to be separated from the mains! Separated plug and socket devices always have to be disconnected from the mains! Otherwise danger of explosion because of sparking, when operating ATEX-certified Controls in explosion endangered areas!



The Control housing must be earthed via ist fastening - i. e. via machine earth or via a separate earth wire (PE)!

### Fastening at the Mounting Surface

#### Preconditions

- Mounting surface clean and flat, i.e. free from paint, rust, etc.
- Threaded hole at the Mounting surface:  
Depth: 10 mm  
Thread: M8

#### Tools and Materials

- Allen wrench, SW24

#### Working Steps

- Tighten Control **friction-locked** into the threaded hole of the mounting surface.



To obtain exact measuring values, the Control has to be tighten **friction-locked** at the mounting surface!

Avoid Auxiliary Constructions! If unavoidable, implement it as stiff as possible!

## 12 Installation and Start-Up

Installing and starting-up the Control may only be executed by an authorized expert, familiar with the safety instructions for handling electrical components. For handling ATEX-certified Controls within explosion endangered surroundings the expert in addition has to be familiar with the safety instructions relevant there.



Prior to starting-up the Control, the mains must be secured with a microfuse (time delay; 1,25 A; breaking capacity C)!



The connection cable and possible extension cables must be protected against electrical influences and mechanical damages. Here local regulations and commissions absolutely have to be considered.

## 13 Maintenance and Repair

Repairing the Control may only be executed by an authorized expert, familiar with the safety instructions for handling electrical components. For handling ATEX-certified Controls within explosion endangered surroundings the expert in addition has to be familiar with the safety instructions relevant there.



Prior to repair and cleaning works the Control has to be separated from the mains! Separated plug and socket devices always have to stay disconnected from the mains! Otherwise danger of explosion because of sparkling, when operating ATEX-certified Controls in explosion endangered areas!



Defective connection cables immediately have to be replaced! Otherwise danger of explosion because of sparkling, when operating ATEX-certified Controls in explosion endangered areas!

A defective Control has to be changed completely!



**Note:** The Type 674 is maintenance free!

### Errortable

Error	Cause	Activity
No Switching Operation	No Power Supply	Check Power Supply and/or Connection Cable
	Connection Cable interrupted	Replace Connection Cable
	Fuse defective	Replace Fuse
	Connection wrong Polarity	Provide correct Polarity
	Control defektive	Replace Control
Switching Operation at the wrong Switching Threshold	Control mounting not friction-locked	Mount Control friction-locked
	Control mounting at wrong position	Mount Control at correct position