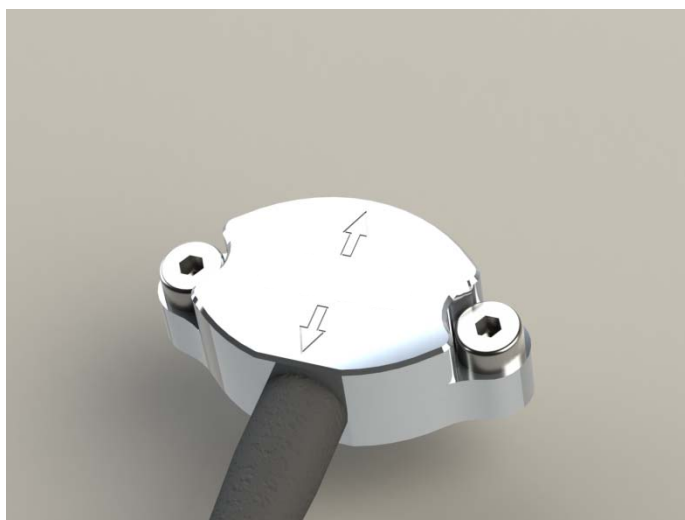


Operating instructions



Oscillation amplitude sensor SWS-01

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Information and explanations

Target group

These operating instructions will help you to use the described product safely and as intended.– **They are directed toward qualified skilled personnel***.





Qualified personnel are people who have been authorized by persons responsible for the safety of the system to execute the required activities and are able to recognize potential dangers and avoid them based on their training, experience and instruction, as well as their knowledge of standards, regulations, accident prevention regulations and operating conditions (definition of skilled personnel according to IEC 364).



- Read these operating instructions before you install the device, use it or carry out work on it.
- Also pass on these operating instructions to other users.

Definition of the warnings and symbols

Warnings are indicated by danger symbols and signal words. The table shows what hazards and possible consequences the symbols, signal words and colours indicate.

Signal word	Definition	Consequences
 GEFAHR	Directly threatening danger	Death or extremely serious injuries
 WARNUNG	Dangerous situation	Potential death or extremely serious injuries
 VORSICHT	Dangerous situation	Minor to moderately serious injuries
ACHTUNG	Risk of property damage	Damage to the machine, its environment and the product
	Warnings can also have other warning signs: Example: Warning of electrical current! These symbols indicate the type of hazard.	

Term definitions

Term	Definition
EMC	Electromagnetic compatibility with electrical and electromagnetic influences.
Skilled personnel	Qualified personnel with the appropriate education, training and experience.
Device	Designation for the oscillation amplitude sensor SWS-01 in these operating instructions

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Product overview

1.1 Scope of delivery

- Oscillation amplitude sensor
- Operating instructions

2 Safety information

2.1 Intended use

The SWS-01 device is a piece of electrical equipment and is meant to be used with a fimotec FS-16 / FS-18 oscillating conveyor control unit. The device is for feeding the oscillation acceleration of oscillating conveyor systems back to the fimotec oscillating conveyor control unit.



The electrical component listed here is referred to as a "device" in the industrial parlance, but it is not a usable or connectable device or machine for the purpose of the "Device safety law", the "EMC law" or the "EC Machinery Directive", but is a component. Only when this component is integrated in the construction of the machine manufacturer is the ultimate mode of operation defined.

The machine manufacturer is responsible for making sure that the construction meets the existing legal regulations.

2.2 Basic safety information

The following warnings both serve for the personal safety of the user as well as the safety of the described products and the devices connected to them.

Non-observance can lead to death, serious bodily injury or property damage.

 DANGER	<p>Life-threatening danger due to electric shock!</p> <p>Even after the device is put out of operation by disconnecting the voltage, there is still dangerous electrical voltage on the internal circuit parts.</p> <ul style="list-style-type: none"> – Disconnect the device from the supply voltage before any intervention. – Check to make sure there is no voltage before any intervention.
	

- Only skilled electricians may work on electrical equipment.
- Before commissioning, make sure that the voltage supply agrees with the nominal values of the device.
- Electrical equipment must be checked regularly. Deficiencies, such as loose connections, damaged or scorched lines, must be fixed immediately.
- Observe the valid accident prevention and safety regulations for your application.
- In particular, observe both the general and the regional installation and safety regulations for working with dangerous voltages (e.g. EN 50178) as well as the regulations having to do with the proper use of tools and the use of personal safety equipment.

2.2.1 Transport and storage

Problem-free and safe operation of this device require proper transport, storage, setup and installation, as well as careful operation and maintenance.

The device must be protected against mechanical impacts and vibrations during transport and storage. Protection against moisture, water and impermissible temperatures (see chapter 4 Technical data) must also be guaranteed.

3 Installation


ATTENTION	If the device is not correctly connected, this can lead to the failure or complete destruction of the device (and the connected load).

3.1 Hardware installation

The oscillation amplitude sensor is a device for installation in oscillating conveyor systems. It is fastened with M5 screws in two fastening holes. The fastening screws are to be secured against loosening unintentionally.

3.2 Connection

The device is connected to the fimatec oscillating conveyor control unit via an M12 sensor plug.

Sketch	Design	Signal
<p>Schemazeichnung</p> 	M12 plug	1: +24 V 2: N.C. 3: 0 V 4: Signal output

3.3 Function

The oscillation amplitude sensor measures the vibration acceleration of an oscillating conveyor and feeds this back to the oscillating conveyor control unit as an analog signal between 0 and 10 V. The output signal is proportional to the vibration acceleration (600 mV/g). In controlled operation, the oscillating conveyor control unit regulates to the pre-defined vibration acceleration and keeps this constant for different load conditions. The oscillation amplitude sensor can measure a maximum vibration acceleration of +/- 16 g and output this to the oscillating conveyor control unit as an analog signal.

Other measuring ranges are possible on request.

4 Technical data

Operating voltage:	+24 V DC
Operating voltage tolerance:	± 10 %
Measuring range:	+/- 16 g
Output:	600 mV/g
Oscillating frequency range:	5...320 Hz
Operating temperature:	-5°C...50°C
Storage temperature:	-20°C...80°C
Type of protection:	IP54

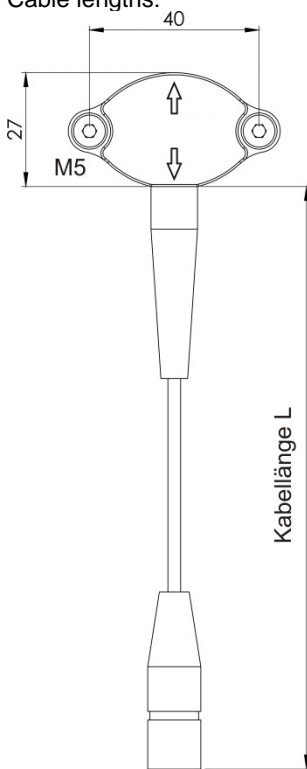
5 Mechanical data

Robust aluminium housing, anodized

Control components completely moulded

Mechanical fastening: 2 x M5

Cable lengths: 1.5 m / 3 m / 5 m



Maintenance and care

5.1 Regular tests

The devices are usually maintenance-free. The electrical equipment of the machines are still to be checked regularly by skilled electricians.

5.2 Decommissioning and disposal

The device is to be decommissioned by skilled electrical personnel while complying with the valid safety regulations.

The packaging of the device can be recycled. Please keep the packaging for later use.

Please carry out disposal in agreement with the local regulations.



Problematic materials must not be thrown away in the normal waste!
Dispose of problematic materials properly, safely and in an environmentally-friendly manner.

