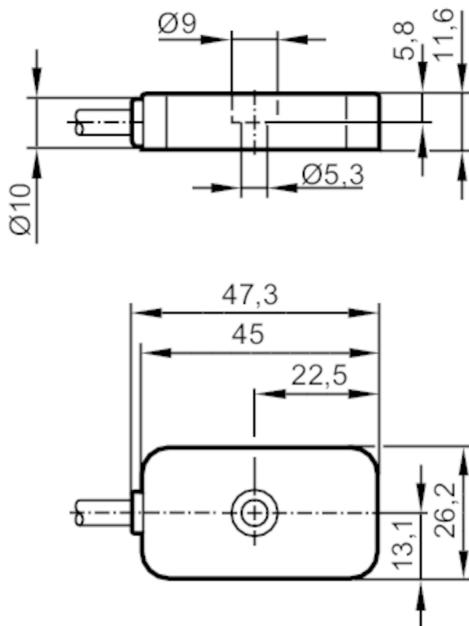


# VSM101

## Accelerometer

VIBRATION SENSOR



### Product characteristics

Measuring range of vibration [g]	-40...40
Frequency range [Hz]	0...4500
Measuring principle	capacitive

### Application

System	screened cable; Drag chain suitability
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### Electrical data

Bias voltage DC [V]	11...16
Operating current [mA]	4...6
Min. insulation resistance [ $M\Omega$ ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Type of sensor	Microelectromechanical system (MEMS)

### Measuring/setting range

Measuring range of vibration [g]	-40...40
Frequency range [Hz]	0...4500
Measuring principle	capacitive
Max. transverse sensitivity [%]	5
Number of measurement axes	3

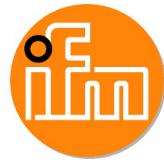
### Accuracy / deviations

Accuracy	0...3 kHz: +/- 10 % 3...4.5 kHz: 3 dB
Measuring sensitivity	100 mV/g
Linearity deviation	2

# VSM101

## Accelerometer

VIBRATION SENSOR



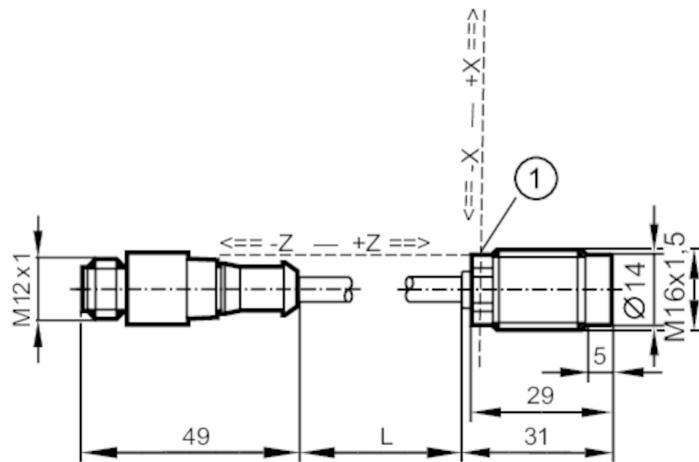
[% of the span]

Operating conditions		
Ambient temperature	[°C]	-30...85
Storage temperature	[°C]	-30...100
Protection		IP 67; IP 68; IP 69K
Tests / approvals		
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27
Vibration resistance		DIN EN 60068-2-6
MTTF	[years]	529
UL approval		Ta Enclosure type voltage supply UL approval number File number UL
Mechanical data		
Weight	[g]	187.2
Type of mounting		mounting screw
Dimensions	[mm]	26.2 x 47.3 x 11.6
Material		housing: stainless steel (1.4404 / 444)
Tightening torque	[Nm]	3.5
Drag chain suitability		yes
Drag chain suitability		Bending radius for flexible applications Bending radius for fixed installation
Accessories		
Items supplied		socket head screw: 1 x (M5 x 12 mm)
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 3 m, PUR, Ø 4.9 mm, screened; Maximum cable length: 250 m; screen (connected to the housing); 5 x 0.14 mm <sup>2</sup>		
brown IEPE X		
white IEPE Z		
blue GND		
black self-test		
grey IEPE Y		
yellow screen		

# VSM102

## Accelerometer

VIBRATION SENSOR



1 marking for X axis



### Product characteristics

Measuring range of vibration	[g]	-40...40
Frequency range	[Hz]	1...4500
Measuring principle		capacitive

### Application

System	Drag chain suitability
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### Electrical data

Bias voltage DC	[V]	13...16
Operating current	[mA]	4...10
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

### Measuring/setting range

Measuring range of vibration	[g]	-40...40
Frequency range	[Hz]	1...4500
Measuring principle		capacitive
Max. transverse sensitivity	[%]	5
Number of measurement axes		2

### Accuracy / deviations

Measuring sensitivity		100 mV/g
Linearity deviation	[% of the span]	2

### Operating conditions

Ambient temperature	[°C]	-30...85
Storage temperature	[°C]	-30...85

# VSM102



## Accelerometer

VIBRATION SENSOR

Protection

IP 67

### Tests / approvals

EMC	EN IEC 61000-6-2	
	EN IEC 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms 500 g 1 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10...2000 Hz
MTTF [years]		1233
UL approval	Ta	≤ 75 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	File number UL	E251902

### Mechanical data

Weight [g]	79.7	
Type of mounting	M16 x 1,5	
Material	housing: stainless steel (1.4404 / 316L)	
Tightening torque [Nm]	8	
Drag chain suitability	yes	
Drag chain suitability	Bending radius for flexible applications Bending radius for fixed installation	min. 10 x cable diameter min. 4 x cable diameter

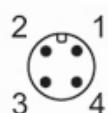
### Remarks

Pack quantity	1 pcs.
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### Electrical connection

Cable: 0.6 m, PUR, Ø 4.9 mm; 4 x 0.14 mm<sup>2</sup>

Connector: 1 x M12; coding: A



1 IEPE X

2 IEPE Z

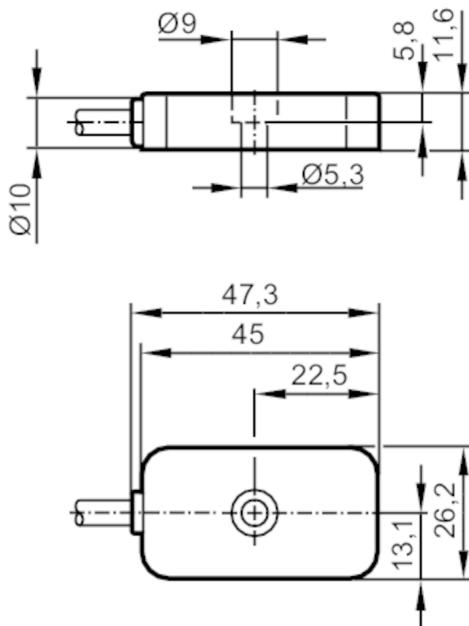
3 GND

4 Test

# VSM103

## Accelerometer

VIBRATION SENSOR



### Product characteristics

Measuring range of vibration [g]	-40...40
Frequency range [Hz]	0...4500
Measuring principle	capacitive

### Application

System	screened cable; Drag chain suitability
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### Electrical data

Bias voltage DC [V]	11...16
Operating current [mA]	4...6
Min. insulation resistance [ $M\Omega$ ]	100; (500 V DC)
Protection class	III
Reverse polarity protection	yes
Type of sensor	Microelectromechanical system (MEMS)

### Measuring/setting range

Measuring range of vibration [g]	-40...40
Frequency range [Hz]	0...4500
Measuring principle	capacitive
Max. transverse sensitivity [%]	5
Number of measurement axes	3

### Accuracy / deviations

Accuracy	0...3 kHz: +/- 10 % 3...4.5 kHz: 3 dB
Measuring sensitivity	100 mV/g
Linearity deviation	2

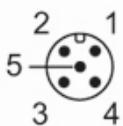
# VSM103

## Accelerometer

VIBRATION SENSOR



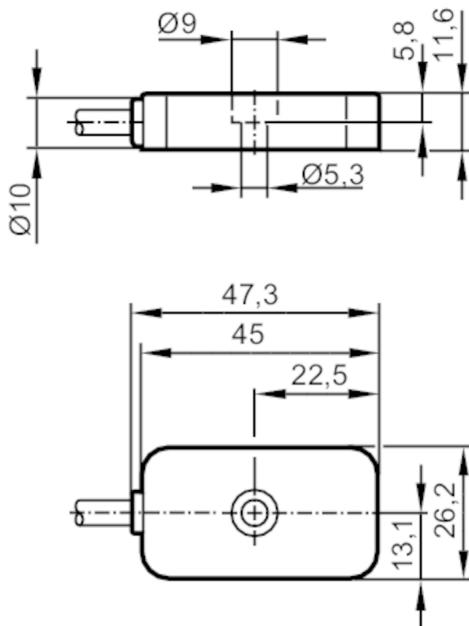
[% of the span]

Operating conditions		
Ambient temperature	[°C]	-30...85
Storage temperature	[°C]	-30...100
Protection		IP 67; IP 68; IP 69K
Tests / approvals		
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27
Vibration resistance		DIN EN 60068-2-6
MTTF	[years]	529
UL approval		Ta Enclosure type voltage supply UL approval number File number UL
		≤ 70 °C 1 Limited Voltage/Current L005 E251902
Mechanical data		
Weight	[g]	105.6
Type of mounting		mounting screw
Dimensions	[mm]	26.2 x 47.3 x 11.6
Material		housing: stainless steel (1.4404 / 444)
Tightening torque	[Nm]	3.5
Drag chain suitability		yes
Drag chain suitability		Bending radius for flexible applications Bending radius for fixed installation
		min. 10 x cable diameter min. 4 x cable diameter
Accessories		
Items supplied		socket head screw: 1 x (M5 x 12 mm)
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 0.3 m, PUR, Ø 4.9 mm, screened; Maximum cable length: 250 m; screen (connected to the housing); 5 x 0.14 mm <sup>2</sup>		
Electrical connection - M12 connector		
		
1		brown = IEPE X
2		white = IEPE Z
3		blue = GND
4		black = self-test
5		grey = IEPE Y

# VSM104

## Accelerometer

VIBRATION SENSOR



### Product characteristics

Measuring range of vibration	[g]	-40...40
Frequency range	[Hz]	0...4500
Measuring principle		capacitive

### Application

System	screened cable; Drag chain suitability
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### Electrical data

Bias voltage DC	[V]	11...16
Operating current	[mA]	4...6
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

### Measuring/setting range

Measuring range of vibration	[g]	-40...40
Frequency range	[Hz]	0...4500
Measuring principle		capacitive
Max. transverse sensitivity	[%]	5
Number of measurement axes		3

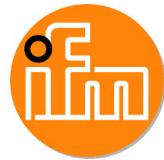
### Accuracy / deviations

Accuracy	0...3 kHz: +/- 10 % 3...4.5 kHz: 3 dB
Measuring sensitivity	100 mV/g
Linearity deviation	2

# VSM104

## Accelerometer

VIBRATION SENSOR



[% of the span]

Operating conditions		
Ambient temperature	[°C]	-30...85
Storage temperature	[°C]	-30...100
Protection		IP 67; IP 68; IP 69K
Tests / approvals		
EMC		DIN EN 61000-6-2 DIN EN 61000-6-3
Shock resistance		DIN EN 60068-2-27
Vibration resistance		DIN EN 60068-2-6
MTTF	[years]	529
UL approval		Ta Enclosure type voltage supply UL approval number File number UL
Mechanical data		
Weight	[g]	427.6
Type of mounting		mounting screw
Dimensions	[mm]	26.2 x 47.3 x 11.6
Material		housing: stainless steel (1.4404 / 444)
Tightening torque	[Nm]	3.5
Drag chain suitability		yes
Drag chain suitability		Bending radius for flexible applications Bending radius for fixed installation
Accessories		
Items supplied		socket head screw: 1 x (M5 x 12 mm)
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 10 m, PUR, Ø 4.9 mm, screened; Maximum cable length: 250 m; screen (connected to the housing); 5 x 0.14 mm <sup>2</sup>		
brown IEPE X		
white IEPE Z		
blue GND		
black self-test		
grey IEPE Y		
yellow screen		