

VSA001



Accelerometer

VIBRATION SENSOR



1 conical angle = 90°



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...6000
Measuring principle		capacitive

Application

Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...6000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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Operating conditions

Ambient temperature	[°C]	-30...125
Note on ambient temperature		cULus: < 85 °C
Storage temperature	[°C]	-30...125
Protection		IP 67; IP 68; IP 69K

VSA001



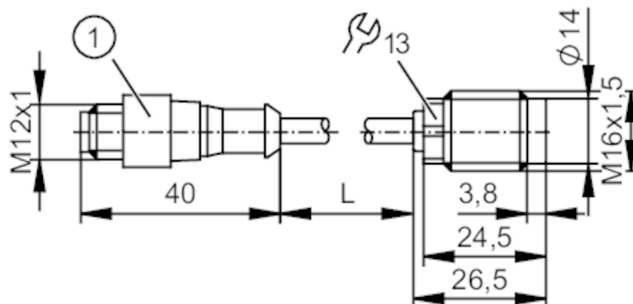
Accelerometer

VIBRATION SENSOR

Tests / approvals		
EMC	EN 61000-6-2	
	EN 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]		1701
Mechanical data		
Weight [g]		50
Housing		tubular
Type of mounting		M8 x 1,25
Dimensions [mm]		Ø 17 / L = 53
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque [Nm]		8
Mechanische Überlastfestigkeit [g]		500
Accessories		
Items supplied		washer, conical
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; coding: A; Maximum cable length: 250 m		
		
1	L+ (+9 V)	
2	I out	
3	GND	
4	Test	

Accelerometer

VIBRATION SENSOR



1 illustration (example)
L 760 mm



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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Operating conditions

Ambient temperature	[°C]	-30...85
Note on ambient temperature		cULus: < 80 °C

VSA002



Accelerometer

VIBRATION SENSOR

Storage temperature	[°C]	-30...85
Protection		IP 67

Tests / approvals

EMC	EN IEC 61000-6-2 2019	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-20	20 g / 10 ... 2000 Hz
MTTF	[years]	2642

Mechanical data

Weight	[g]	87.5
Type of mounting		M16 x 1,5
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	8
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter

Remarks

Pack quantity	1 pcs.
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Electrical connection

Cable: 0.76 m, PUR, Ø 5 mm, screened; Maximum cable length: 250 m; screen (connected to the housing)

Connector: 1 x M12; coding: A; Maximum cable length: 250 m

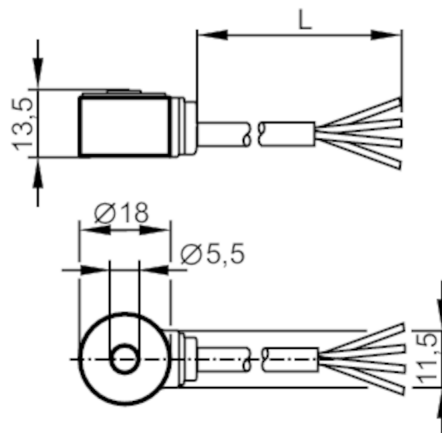


1	L+ (+9 V)
2	I out
3	GND
4	Test



Accelerometer

VIBRATION SENSOR



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	Halogen-free; screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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VSA004



Accelerometer

VIBRATION SENSOR

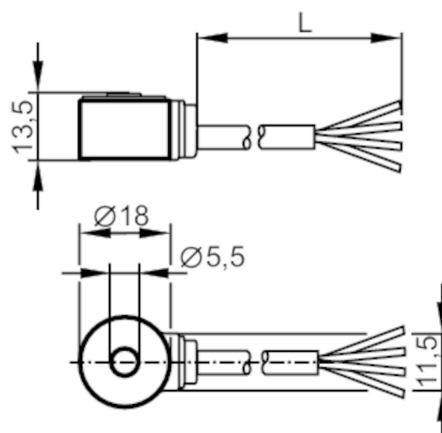
Operating conditions		
Ambient temperature	[°C]	-20...80
Note on ambient temperature		cULus: < 80 °C
Storage temperature	[°C]	-20...80
Max. relative air humidity	[%]	80; (40 °C: 50 % non condensing)
Protection		IP 67
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10 ... 2000 Hz
MTTF	[years]	2660
Mechanical data		
Weight	[g]	120.5
Type of mounting		mounting screw
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	5
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter
Accessories		
Items supplied		head cap screw: 1 x (M5 x 20 mm), Torx 15
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 3 m, PUR, Halogen-free, Ø 4 mm, screened; Maximum cable length: 250 m; drain wire applied to the housing; 4 x 0.14 mm²		
blue	GND	
black	test	
brown	L+	
white	Out	
screen	drain wire	

VSA005



Accelerometer

VIBRATION SENSOR



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	Halogen-free; screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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VSA005



Accelerometer

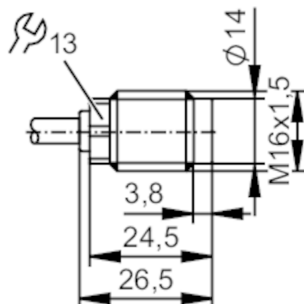
VIBRATION SENSOR

Operating conditions		
Ambient temperature	[°C]	-20...80
Note on ambient temperature		cULus: < 80 °C
Storage temperature	[°C]	-20...80
Max. relative air humidity	[%]	80; (40 °C: 50 % non condensing)
Protection		IP 67
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-20	20 g / 10 ... 2000 Hz
MTTF	[years]	2660
Mechanical data		
Weight	[g]	323.5
Type of mounting		mounting screw
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	5
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter
Accessories		
Items supplied		head cap screw: 1 x (M5 x 20 mm), Torx 15
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 10 m, PUR, Halogen-free, Ø 4 mm, screened; Maximum cable length: 250 m; drain wire applied to the housing; 4 x 0.14 mm²		
blue	GND	
black	test	
brown	L+	
white	Out	
screen	drain wire	



Accelerometer

VIBRATION SENSOR



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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Operating conditions

Ambient temperature	[°C]	-30...85
Note on ambient temperature		cULus: < 80 °C
Storage temperature	[°C]	-30...85

VSA006



Accelerometer

VIBRATION SENSOR

Protection		IP 67	
Tests / approvals			
EMC		EN IEC 61000-6-2 2019	
		EN 61000-6-3	
Shock resistance		DIN EN 60068-2-27	50 g 11 ms
Vibration resistance		DIN EN 60068-2-20	20 g / 10 ... 2000 Hz
MTTF [years]		2642	
Mechanical data			
Weight [g]		257.5	
Type of mounting		M16 x 1,5	
Material		housing: stainless steel (1.4404 / 316L)	
Tightening torque [Nm]		8	
Mechanische Überlastfestigkeit [g]		500	
Drag chain suitability		yes	
Drag chain suitability		Bending radius for fixed installation	: min. 4 x cable diameter
		Bending radius for flexible applications	: min. 15 x cable diameter
Remarks			
Pack quantity		1 pcs.	
Electrical connection			
Cable: 6 m, PUR, Ø 5 mm, screened; Maximum cable length: 250 m; drain wire applied to the housing; 4 x 0.25 mm²			
blue	GND		
brown	L+		
black	test		
white	OUT		
screen	drain wire		



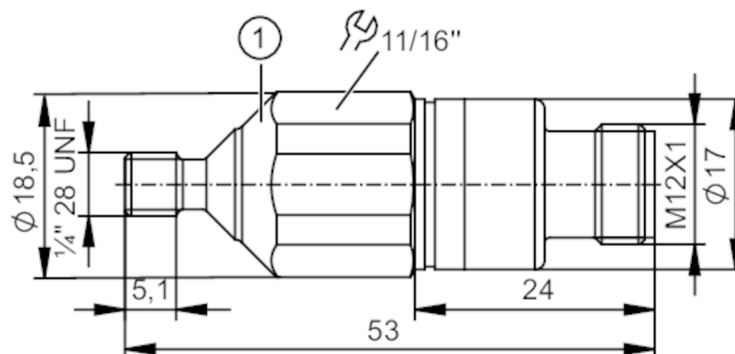
Accelerometer

VIBRATION SENSOR

Article to be discontinued
Discontinuation date: 03/31/2026

Alternative articles: VSA001

When selecting an alternative article and accessories please note that technical data may differ!



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...6000
Measuring principle		capacitive

Application

Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...6000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		0,2 %
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VSA007



Accelerometer

VIBRATION SENSOR

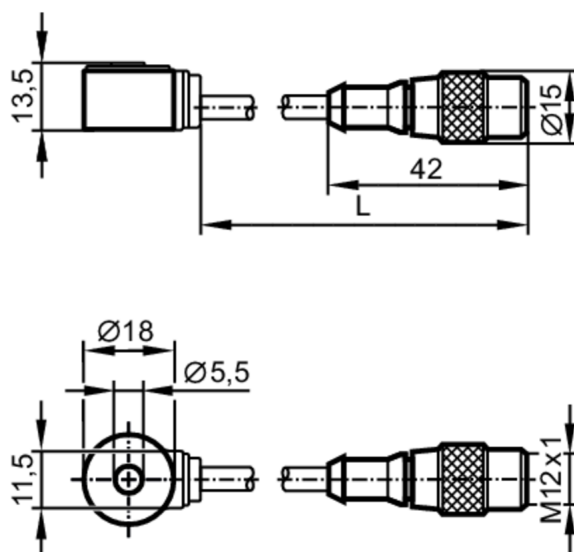
Operating conditions		
Ambient temperature	[°C]	-30...125
Note on ambient temperature		cULus: < 85 °C
Storage temperature	[°C]	-30...125
Protection		IP 67; IP 68; IP 69K
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
		500 g 1 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10 ... 2000 Hz
UL approval	Ta	< 85 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	File number UL	E251902
Mechanical data		
Weight	[g]	49.9
Type of mounting		1/4"-28 UNF
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	8
Mechanische Überlastfestigkeit	[g]	500
Accessories		
Items supplied		washer, conical
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; coding: A; Maximum cable length: 250 m		
		
1	L+ (+9 V)	
2	I out	
3	GND	
4	Test	

VSA008



Accelerometer

VIBRATION SENSOR



Product characteristics

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-25...25
Frequency range	[Hz]	1...10000
Measuring principle		capacitive
Sensitivity	[μA/g]	142
Number of measurement axes		1



Accelerometer

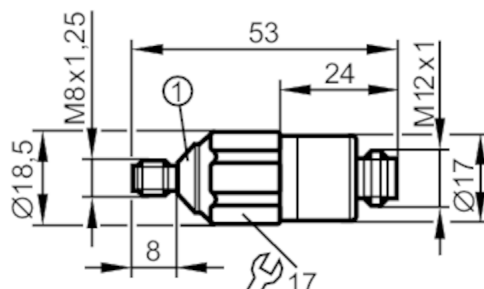
VIBRATION SENSOR

Accuracy / deviations		
Linearity deviation		0,2 %
Operating conditions		
Ambient temperature	[°C]	-30...80
Storage temperature	[°C]	-20...80
Max. relative air humidity	[%]	80; (40 °C: 50 % non condensing)
Protection		IP 67
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10 ... 2000 Hz
UL approval	Ta	75 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	File number UL	E251902
Mechanical data		
Weight	[g]	64.2
Type of mounting		mounting screw
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	5
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter
Accessories		
Items supplied		head cap screw: 1 x (M5 x 20 mm), Torx 15
Remarks		
Pack quantity		1 pcs.
Electrical connection - plug		
Cable: 0.5 m, PUR, screened; Maximum cable length: 250 m; 4 x 0.14 mm²		
Connector: M12; coding: A		
		
blue	GND	
black	test	
brown	L+	
white	Out	

VSA201

Accelerometer

VIBRATION SENSOR



1 conical angle = 90°



Product characteristics

Measuring range of vibration	[g]	-250...250
Frequency range	[Hz]	1...6000
Measuring principle		capacitive

Application

Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-250...250
Frequency range	[Hz]	1...6000
Measuring principle		capacitive
Sensitivity	[μA/g]	14.2
Number of measurement axes		1

Accuracy / deviations

Linearity deviation		5 %
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Operating conditions

Ambient temperature	[°C]	-30...125
Note on ambient temperature		UL application: < 70 °C
Storage temperature	[°C]	-30...125
Protection		IP 67; IP 68; IP 69K

**Accelerometer**

VIBRATION SENSOR

Tests / approvals		
EMC	EN 61000-6-2	
	EN 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]		3094
Mechanical data		
Weight [g]		49
Housing		tubular
Type of mounting		M8 x 1,25
Dimensions [mm]		Ø 17 / L = 53
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque [Nm]		8
Accessories		
Items supplied		washer, conical
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Connector: 1 x M12; coding: A; Maximum cable length: 250 m		
		
1	L+ (+9 V)	
2	I out	
3	GND	
4	Test	



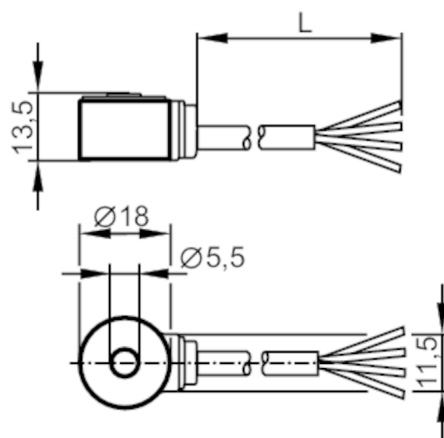
Accelerometer

VIBRATION SENSOR

Article to be discontinued
Discontinuation date: 03/31/2026

Alternative articles: VSA201

When selecting an alternative article and accessories please note that technical data may differ!



Product characteristics

Measuring range of vibration	[g]	-150...150
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-150...150
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

VSA204



Accelerometer

VIBRATION SENSOR

Sensitivity	[μA/g]	35.5
Number of measurement axes		1
Accuracy / deviations		
Linearity deviation		0,2 %
Operating conditions		
Ambient temperature	[°C]	-20...80
Storage temperature	[°C]	-20...80
Max. relative air humidity	[%]	80; (40 °C: 50 % non condensing)
Protection		IP 67
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10 ... 2000 Hz
MTTF	[years]	2104
UL approval	Ta	80 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	File number UL	E251902
Mechanical data		
Weight	[g]	114.3
Type of mounting		mounting screw
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	5
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter
Accessories		
Items supplied		head cap screw: 1 x (M5 x 20 mm), Torx 15
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 3 m, PUR, Ø 4 mm, screened; Maximum cable length: 250 m; drain wire applied to the housing; 4 x 0.14 mm²		
blue	GND	
black	test	
brown	L+	
white	Out	
screen	drain wire	



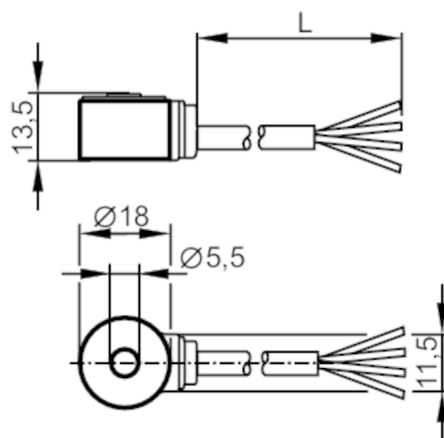
Accelerometer

VIBRATION SENSOR

Article to be discontinued
Discontinuation date: 03/31/2026

Alternative articles: VSA201

When selecting an alternative article and accessories please note that technical data may differ!



Product characteristics

Measuring range of vibration	[g]	-150...150
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

Application

System	screened cable; Drag chain suitability
Design	for connection to external diagnostic electronics VSE
Application	vibration detection

Electrical data

Operating voltage	[V]	7.2...10.8 DC
Current consumption	[mA]	< 15
Min. insulation resistance	[MΩ]	100; (500 V DC)
Protection class		III
Reverse polarity protection		yes
Type of sensor		Microelectromechanical system (MEMS)

Outputs

Analog current output	[mA]	0...10
Max. load	[Ω]	300

Measuring/setting range

Measuring range of vibration	[g]	-150...150
Frequency range	[Hz]	1...10000
Measuring principle		capacitive

VSA205



Accelerometer

VIBRATION SENSOR

Sensitivity	[μ A/g]	35.5
Number of measurement axes		1
Accuracy / deviations		
Linearity deviation		0,2 %
Operating conditions		
Ambient temperature	[°C]	-20...80
Storage temperature	[°C]	-20...80
Max. relative air humidity	[%]	80; (40 °C: 50 % non condensing)
Protection		IP 67
Tests / approvals		
EMC	EN 61000-6-2	
	EN 61000-6-3	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10 ... 2000 Hz
MTTF	[years]	2104
UL approval	Ta	80 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	File number UL	E251902
Mechanical data		
Weight	[g]	309.7
Type of mounting		mounting screw
Material		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	5
Mechanische Überlastfestigkeit	[g]	500
Drag chain suitability		yes
Drag chain suitability	Bending radius for fixed installation	: min. 4 x cable diameter
	Bending radius for flexible applications	: min. 15 x cable diameter
Accessories		
Items supplied		head cap screw: 1 x (M5 x 20 mm), Torx 15
Remarks		
Pack quantity		1 pcs.
Electrical connection		
Cable: 10 m, PUR, Ø 4 mm, screened; Maximum cable length: 250 m; drain wire applied to the housing; 4 x 0.14 mm ²		
blue	GND	
black	test	
brown	L+	
white	Out	
screen	drain wire	