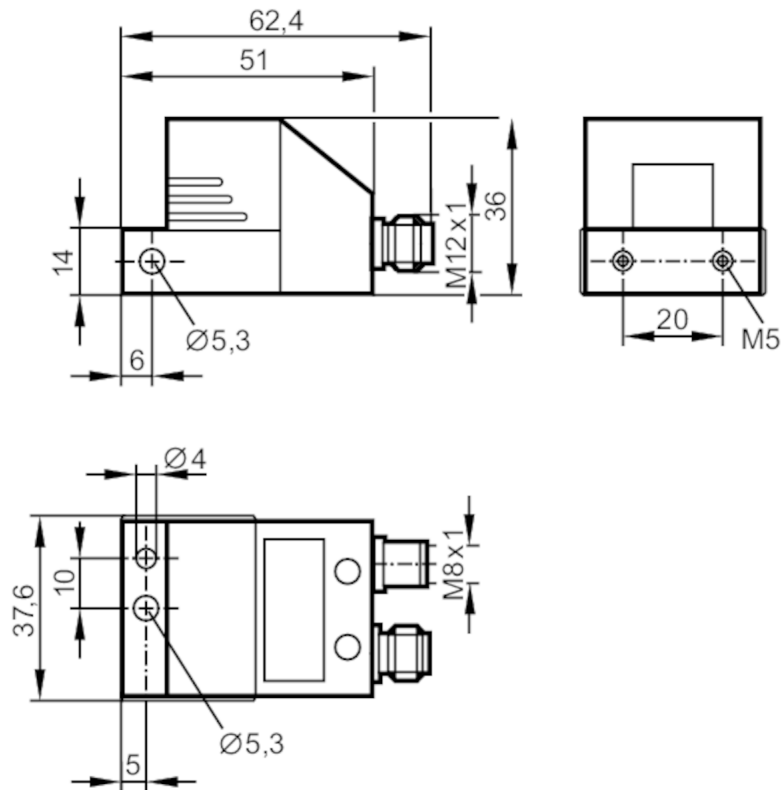


VNB001



Vibration sensor

VIBRATION SENSOR



Product characteristics

Measuring range of vibration [mm/s]	0...500; (depending on the vibration frequency)
Frequency range [Hz]	2...1000
Measuring principle	capacitive

Application

Application	vibration sensor to ISO 10816
Self-test function	yes
Heartbeat function	yes

Electrical data

Operating voltage [V]	9.6...30 DC; (or via USB (switching outputs not active))
Current consumption [mA]	< 70
Protection class	III
Reverse polarity protection	yes
Sensor type	micromechanical accelerometer

Inputs / outputs

Total number of inputs and outputs	3; (configurable)
Number of inputs and outputs	Number of analogue inputs: 1; Number of digital outputs: 2; Number of analogue outputs: 1

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Inputs		
Number of analogue inputs	1	
Analogue input (current) [mA]	4...20	
Outputs		
Output signal	switching signal; analogue signal	
Number of digital outputs	2	
Max. voltage drop switching output DC [V]	2	
Minimum load current [mA]	100	
Number of analogue outputs	1	
Analogue current output [mA]	4...22	
Max. load [Ω]	9,6...17 V: 150; 17...30 V: 500	
Factory setting	switching output: normally closed	
	switch point pre-alarm: 2,8 mm/s	
	switch point main alarm: 4,5 mm/s	
	Frequency range: 10...1000 Hz	
	measuring method: RMS	
	unit: mm/s	
Short-circuit protection	yes	
Overload protection	yes	
Measuring/setting range		
Measuring range of vibration [mm/s]	0...500; (depending on the vibration frequency)	
Frequency range [Hz]	2...1000	
Measuring principle	capacitive	
Number of measurement axes	1	
Accuracy / deviations		
Measuring error [% of the final value]	± 3%	
Interfaces		
Communication interface	USB	
Operating conditions		
Ambient temperature [°C]	-30...60	
Storage temperature [°C]	-30...85	
Protection	IP 67	
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV contact discharge / 15 kV air discharge
	EN 61000-4-3	10 V/m 80...2000 MHz
	EN 61000-4-4 Burst	4 kV capacitive coupling probe, earthed
	EN 61000-4-6	10 V 0,15...80 MHz
	EN 61000-6-4	industrial environments
Shock resistance	DIN EN 60068-2-27	50 g 11 ms / n=1000
MTTF [years]		148

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Mechanical data	
Weight [g]	273.5
Type of mounting	mounting set M5/M8
Dimensions [mm]	36 x 37.6 x 62.4
Materials	housing: diecast zinc nickel-plated
Tightening torque [Nm]	7

Displays / operating elements		
Display	function	6 LED, green
	pre-alarm	1 LED, yellow
	main alarm	1 LED, red
Operating elements	alphanumeric display, 4-digit parameter setting via pushbuttons	

Data memories	
History memory	yes
Data memory type	ring memory; FIFO
With real-time clock	yes
Type of real-time clock	UTC, battery buffered
Memory location	internal
Memory interval	5 min
Memory size	686774 data records

Accessories	
Accessories (supplied)	Spring washer
	screw
	adapters: 1 x M8 x M5

Remarks	
Pack quantity	1 pcs.

Electrical connection - Process connection	
1	L+ (9.6...30 V DC)
2	Out 1 switching output analogue output
3	L-
4	Out 2 switching output
5	In 4...20 mA

Connector: 1 x M12

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Electrical connection - USB

1	VCC (5 V)
2	USB D-
3	L -
4	USB D+

Connector: 1 x M8

