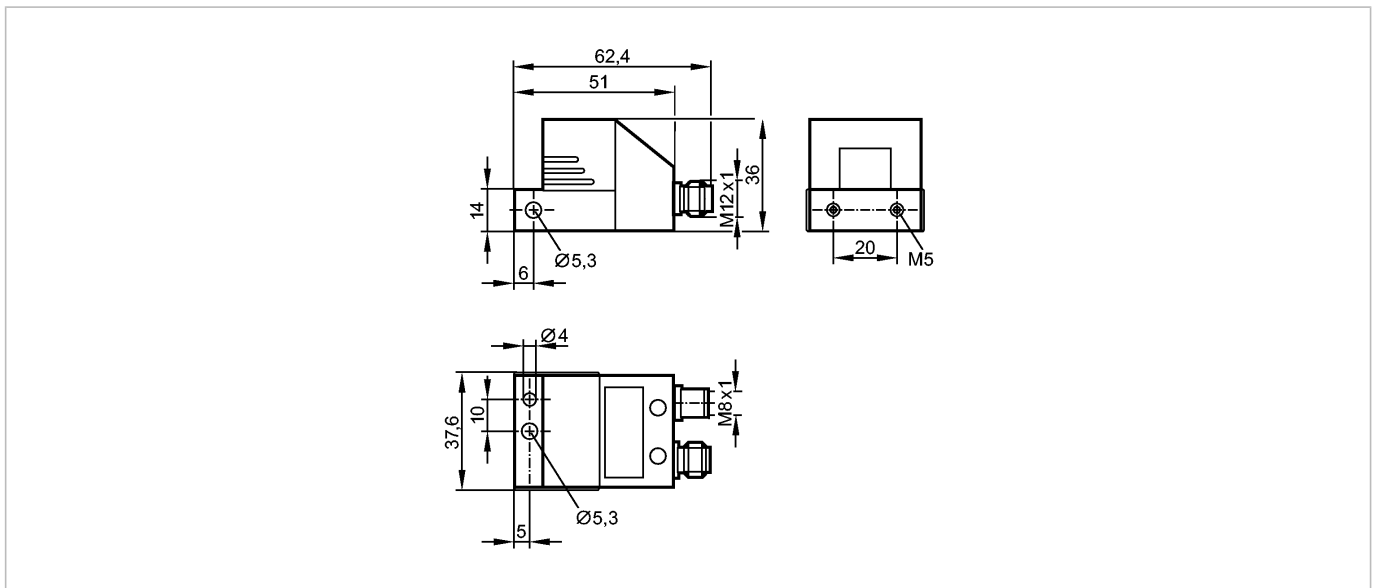


VNB001

VIBRATION SENSOR

Vibration sensors



Product characteristics

Vibration sensor	
VN	
Connection via M12 x 1 and M8 x 1 connectors	
Vibration sensor to ISO 10816	
Parameter setting via pushbuttons	

Electrical data

Operating voltage [V]	9.6...30 DC; or via USB (switching outputs not active)
Current consumption [mA]	< 70 (24 V)
Protection class	III
Reverse polarity protection	yes

Inputs / outputs

Circuit	2 switching outputs or 1 switching output and 1 current output 4...20 mA (can be set via pushbuttons) 1 current input 4...20 mA
Inputs / outputs total	3, configurable

Inputs

analogue	
Analogue input	4...20 mA

Outputs

Voltage drop [V]	< 2
max. load current	
Short-circuit protection	yes
Overload protection	yes
analogue	
current output [mA]	4...20
Max. load [Ω]	150 (9.6...17 V) / 500 (17...30 V)


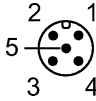
Measuring / setting range

Measurement method	v peak or v rms (can be set via pushbuttons)
Measuring principle	capacitive

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Measuring range	[mm/s]	0...500, depending on the vibration frequency
Frequency range	[Hz]	2...1000
Accuracy / deviations		
Accuracy	[% of the final value]	± 3%
Software / programming		
History memory		ring memory, sampling rate 5 min., recording duration approx. 3 years with real-time clock
Interfaces		
Data interface		USB; 2.0
Environment		
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
Mechanical data		
Type of sensor		micromechanical accelerometer
Number of measurement axes		1
Mechanical overload resistance	[g]	100
Housing materials		housing: diecast zinc nickel-plated
Type of mounting		Mounting set M5 / M8
Weight	[kg]	0.266
Displays / operating elements		
Display		4-digit alphanumeric display
Function display	LED	6x green; 1x yellow; 1x red
Electrical connection		
Connection		M12 connector; M8 connector
Wiring		
		Pin 1: VCC (5 V) via USB interface Pin 2: USB D- Pin 3: L - Pin 4: USB D+
		Pin 1: L+ (9.6...30 V DC) Pin 2: Out 1 Switching output or current output 4...20 mA (can be set) Pin 3: L- Pin 4: Out 2 Switching output Pin 5: In 4...20 mA
Other technical data		
Real-time clock		UTC, battery buffered
Self-test		yes

**VNB001**

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Factory setting

OU1, OU2: switching output NC
switch point early warning (OU1): yellow 2.8 mm/s
switch point main alarm (OU2): red 4.5 mm/s
frequency range: 10...1000 Hz
measurement method: rms
unit: mm/s

Accessories

Accessories (included)

spring washer; screw; Adapter M8 x M5

Remarks

Pack quantity

[piece]

1