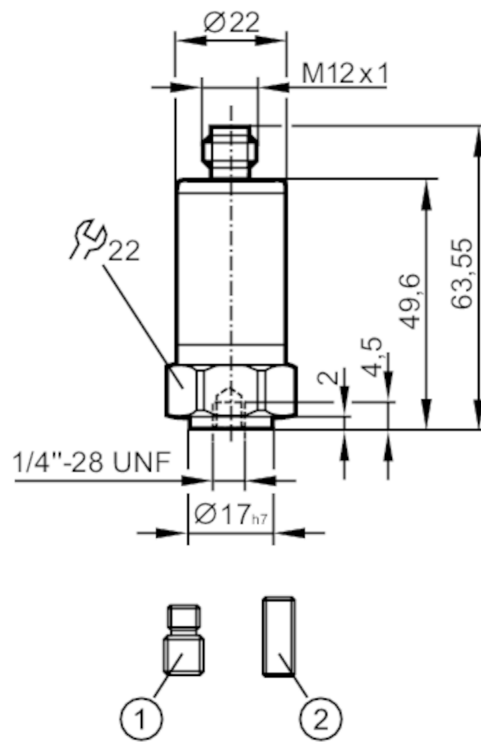


# VVB001



## Vibration sensor

VIBRATION IO-LINK SWITCH



- 1 set screw 1/4"-28 UNF / M8  
2 set screw 1/4"-28 UNF



### Product characteristics

Measuring range of vibration	0...50 g	0...490.3 m/s <sup>2</sup>	0...45 mm/s
Frequency range [Hz]	2...10000		
Measuring principle	capacitive		

### Application

Application	industrial machines
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### Electrical data

Operating voltage [V]	18...30 DC
Current consumption [mA]	< 250
Min. insulation resistance [MΩ]	100; (500V DC)
Protection class	III
Reverse polarity protection	yes
Sensor type	microelectromechanical system (MEMS)

### Inputs / outputs

Number of inputs and outputs	Number of digital outputs: 2
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Outputs			
Output signal	switching signal; IO-Link		
Electrical design	PNP/NPN; (configurable)		
Number of digital outputs	2		
Output function	normally open / normally closed		
Max. voltage drop switching output DC [V]	2		
Max. current load per output [mA]	100		
Short-circuit protection	yes		
Type of short-circuit protection	pulsed		
Overload protection	yes		
Measuring/setting range			
Note on setpoint SP	parameterisable		
Measuring range of vibration	0...50 g	0...490.3 m/s <sup>2</sup>	0...45 mm/s
Frequency range [Hz]	2...10000		
Measuring principle	capacitive		
Number of measurement axes	1		
Set point SP	0.2...50 g	2...490.3 m/s <sup>2</sup>	0.2...45 mm/s
Reset point rP	0...49.8 g	0...488.3 m/s <sup>2</sup>	0...44.8 mm/s
In steps of	0.2 g	2 m/s <sup>2</sup>	0.2 mm/s
Temperature measurement			
Measuring range [°C]	-30...80		
Resolution [°C]	0.1		
Accuracy / deviations			
Accuracy	< 4 kHz +/-10 %; < 10 kHz < 3 dB		
Linearity deviation	2 %		
Software / programming			
Parameter setting options	Software		
Diagnostic functions	self-test		
Interfaces			
Communication interface	IO-Link		
Transmission type	COM2 (38,4 kBaud)		
IO-Link revision	1.1		
SDCI standard	IEC 61131-9: 2013-07		
IO-Link device ID	1028d / 000404h		
Profiles	Blob (0x0030); Measuring sensor (0x800A); Common Profile (0x4000)		
SIO mode	yes		
Required master port type	A		
Process data analogue	10		
Process data binary	2		
Min. process cycle time [ms]	11.6		
IO-Link functions (acyclical)	filter for v-RMS, a-RMS, a-Peak; Hysteresis; window; switch points; switching logic		

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Operating conditions		
Ambient temperature	[°C]	-30...80
Storage temperature	[°C]	-30...80
Protection		IP 67; IP 68; IP 69K
Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-3	
	DIN EN 50178	
Shock resistance	DIN EN 60068-2-27	50 g 11 ms
Vibration resistance	DIN EN 60068-2-6	20 g / 10...3000 Hz
MTTF	[years]	299
Mechanical data		
Weight	[g]	116
Type of mounting		set screw
Materials		housing: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	8
Accessories		
Components		set screw: 1 x 1/4" 28 UNF / M8
		set screw: 1 x 1/4"28 UNF x 5/8" DIN916
Remarks		
Pack quantity		1 pcs.
Electrical connection		
1	L+	
2	OUT2	
3	L-	
4	OUT1 switching output or IO-Link	
Connector: 1 x M12; Maximum cable length: 20 m		
