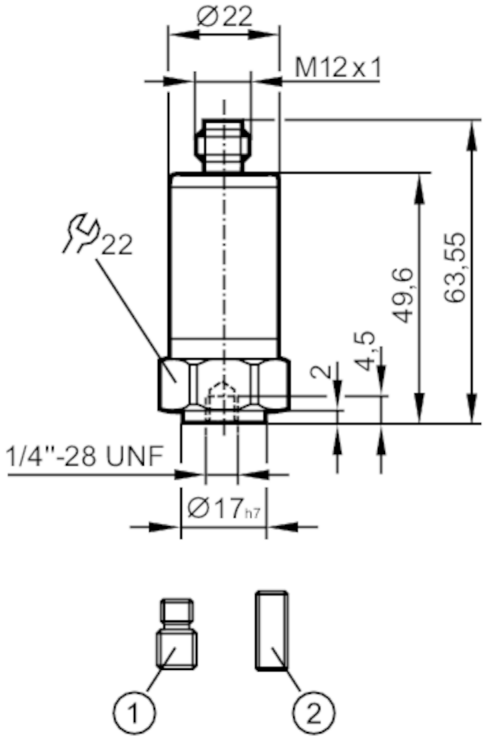
VVB010

Vibration sensor

VIBRATION IO-LINK SWITCH



1 set screw ¼"-28 UNF / M8
2 set screw ¼"-28 UNF

Product characteristics			
Measuring range of vibration		0...50 g	0...490.3 m/s²
Measuring range of vibration [mm/s]		0...45	
Frequency range	[Hz]	2...10000	
Measuring principle		capacitive	
Application			
Application		big machines, performance > 300 kW, speed > 600 rpm	
Electrical data			
Operating voltage	[V]	18...30 DC	
Current consumption	[mA]	< 250	
Min. insulation resistance	[MΩ]	100; (500 V 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	
Outputs			
Output signal		switching signal; IO-Link	
Electrical design		PNP/NPN; (configurable)	

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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/s²
Measuring range of vibration	[mm/s]	0...45	
Frequency range	[Hz]	2...10000	
Measuring principle		capacitive	
Number of measurement axes		1	
Set point SP		0.2...50 g	2...490.3 m/s²
Set point SP	[mm/s]	0.2...45	
Reset point rP		0...49.8 g	0...488.3 m/s²
Reset point rP	[mm/s]	0...44.8	
In steps of		0.2 g	2 m/s²
In steps of	[mm/s]	0.2	
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	
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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Supported DeviceIDs		**Type of operation**	**DeviceID**
		default	1255
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	
UL approval		UL Approval no.	L002
Mechanical data			
Weight	[g]	116	
Type of mounting		set screw	
Materials		housing: stainless steel (1.4404 / 316L)	
Tightening torque	[Nm]	8	
Accessories			
Items supplied		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

Connector: 1 x M12; coding: A; Maximum cable length: 20 m



1	L+
2	OUT2
3	L-
4	OUT1 switching output or IO-Link