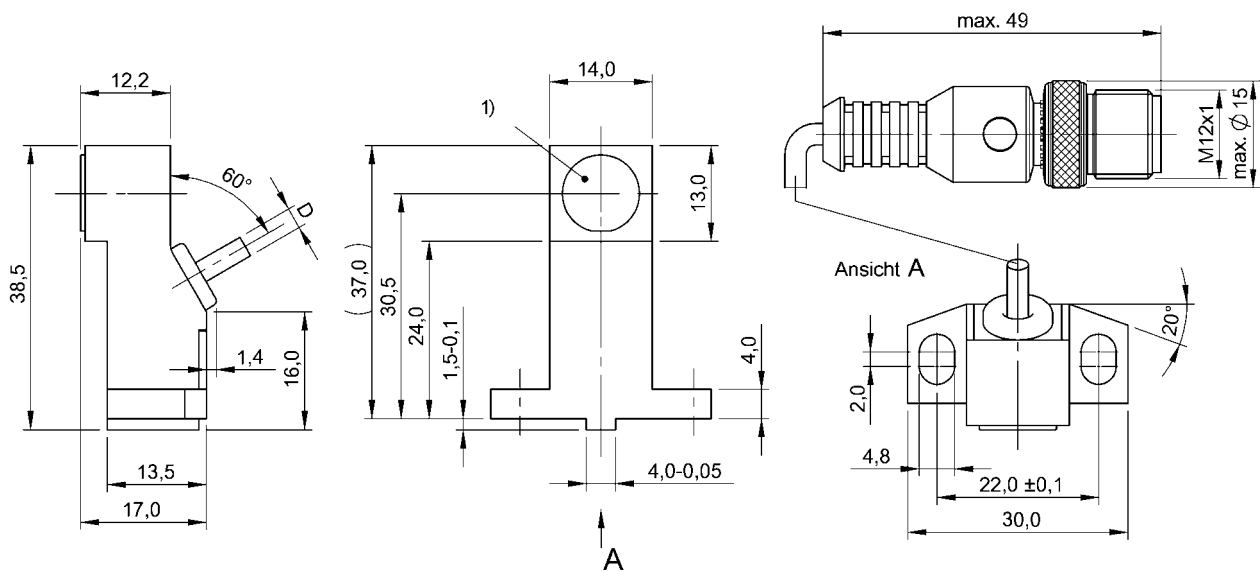


Inductive Sensors
BAW Z05AC-BLD50B-BP00,75-GS04
Order Code: BAW003W

BALLUFF



1) Sensing surface



Basic features

Basic standard	IEC 60947-5-2 IEC 60947-5-7
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Display/Operation

Power indicator	no
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Electrical connection

Bending radius min., fixed cable	3 x D
Bending radius min., flexible cable	5 x D
Cable diameter D	2.85...3 mm
Cable length L	0.75 m
Conductor cross-section	0.14 mm ²
Connection	M12x1-Male, 4-pin, A-coded
Connection type	Cable with connector, 0.75 m, PUR
Number of conductors	3
Polarity reversal protected	yes
Protection against device mix-ups	yes
Short-circuit protection	yes

Electrical data

Limit frequency -3 dB	200 Hz
No-load current I _o max. at U _e	12 mA
Operating voltage U _b	18...30 VDC
Rated insulation voltage U _i	75 V DC
Rated operating voltage U _e DC	24 V
Ripple max. (% of U _e)	15 %
Temperature output	-9 mV/°C

Environmental conditions

Ambient temperature	-10...60 °C
Contamination scale	3
EN 60068-2-27, Shock	Half-sinus, 30 g _n , 11 ms
EN 60068-2-6, Vibration	55 Hz, amplitude 1 mm, 3x30 min
IP rating	IP67

Functional safety

MTTF (40 °C)	640 a
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IO-Link

IO-Link Profil IDs	N/A
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Interface

Interface	IO-Link 1.1 10 bits
Output characteristic	falling on approach

Material

Housing material	Aluminium, Anodized
Material jacket	PUR
Material sensing surface	LCP

Mechanical data

Dimension	30 x 38.5 x 16.5 mm
Installation	non-flush

Range/Distance

Linearity range SI	1...5 mm
Measuring range	1...5 mm

Non-linearity max.	±150 µm
Repeat accuracy per BWN	±12 µm
Temperature drift max. from end value	±5.0 %

Remarks

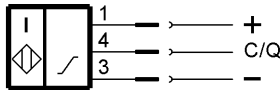
Detection range to 5.4 mm possible at optimum working temperature.
Above SI max. linearity errors and temp. drift are outside of specification.
UL-MARKINGS: - For use in NFPA 79 Applications only - Adapters providing field wiring means are available from the manufacturer. Refer to manufacturers information.
For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

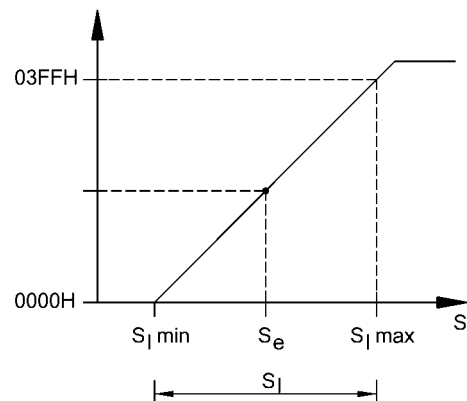
Connector Drawings



Wiring Diagrams



Technical Drawings



Help Views

Process data

Byte 0								Byte 1							
7	6	5	4	3	2	1	0	7	6	5	4	3	2	1	0
Error	Switch point 1	Switch point 2	Switch point 3			MSB	Analog value							LSB	

Parameter data

Parameter data								
	DPP Index	SPDU Sub Index		Objekt name	Length	Range	Default value	
Identification data	0x07			Vendor ID	2 Byte	read only	0x0378	
	0x08			Device ID	3 Byte		0x020201	
	0x09							
	0x0A							
	0x0B							
		0x10	0	Vendor name	8 Byte		BALLUFF	
		0x11	0	Vendor text	16 Byte		www.balluff.com	
		0x12	0	Product name	34 Byte		BAW Z05AC-BLD50B-BP00,75-GS04	
		0x13	0	Product ID	21 Byte		185858	
		0x14	0	Product text	34 Byte		Inductive distance sensor, 1...5mm	
		0x16	0	Hardware Revision	3 Byte		1.00	
Parameter data		0x17	0	Firmware Revision	3 Byte	1.00		
		0x40 64	0	Switch point 1	2 Byte	0x0000-0x03E8	0x00C8	
		0x41 65	0	Switch point 2	2 Byte	0x0000-0x03E8	0x01F4	
		0x42 66	0	Switch point 3	2 Byte	0x0000-0x03E8	0x0320	
		0x43 67	0	Hysteresis	1 Byte	0x00-0xFF	0x0A	
		0x44 68	0	Temperature *	1 Byte		-	

* Interne Temperatur des µC.

Error data

Error Code	Additional Code	Error Code	Additional Code	Error Code	Additional Code
device application error	Index not available	device application error	SubIndex not available	device application error	value out of range
0x80	0x11	0x80	0x12	0x80	0x30