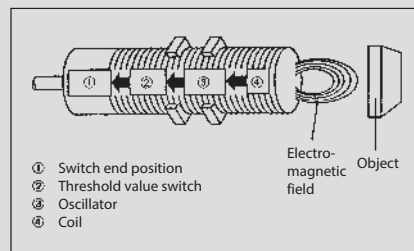


Inductive Sensors

Functional principle

In general, inductive proximity switches consist of four basic elements: a coil, an oscillator, a threshold switch and an output stage with short-circuit protection. The oscillator generates a high frequency, electromagnetic alternating field which is emitted from the active face of the coil. Eddy currents are induced in a metal object that enters this field. These eddy currents draw energy from both the electromagnetic field and from the oscillator which is consequently attenuated. The more energy taken the closer the metal object moves towards the active face. The threshold switch switches on the output stage at a defined attenuation value. In proximity switches with a DC voltage supply, this switch is designed as an NPN transistor which switches the connected load to the negative pole or as a PNP transistor which switches the load to the positive pole. The output stage is a thyristor or a triac in AC voltage switches.

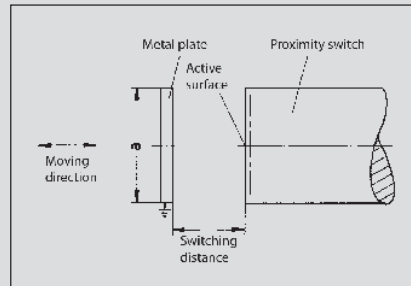


Sensing distance

The sensing distance (gap) is determined by the coil diameter, i.e. larger sensors are required for larger sensing distances. The sensing distance is also dependent on the size of the metal object to be detected as well as the material it is made from.

Target

The sensing distance is measured with a 1 mm thick square measuring plate made of steel (ST 37) referred to as a target. The edge length is equal to the diameter of the active face or equal to three times the sensing distance depending on which value is greater.



Nominal sensing distance: (Sn)

The nominal sensing distance is a device-specific characteristic value that is dependent on the coil diameter.

Real sensing distance: (Sr)

The real sensing distance is measured at nominal voltage and nominal temperature. It must be between 90 % – 110 % of the nominal sensing distance.

Useable sensing distance: (Su)

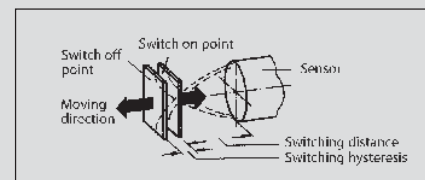
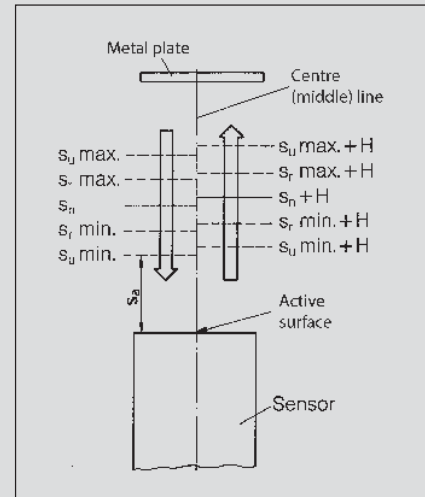
The useable sensing distance is measured within the permissible temperature and voltage ranges and is 90 % – 110 % of the real sensing distance.

Operational sensing distance: (Sa) (Assured operation distance)

The operational sensing distance takes into account the influence of the supply voltage, temperature and control systems. Reliable switching under all permissible operating conditions is assured within 0 % – 81 % of the nominal sensing distance. $S_a \sim 0.81 S_n$.

Hysteresis: (H)

Hysteresis refers to the difference between the switch-on point as an object approaches and the switch-off point as the object moves away. This hysteresis is specified as a percentage of the nominal sensing distance and is typically 10 %. It is required to prevent the output chattering in response to slowly approaching objects, temperature drift, electrical interference or vibration.

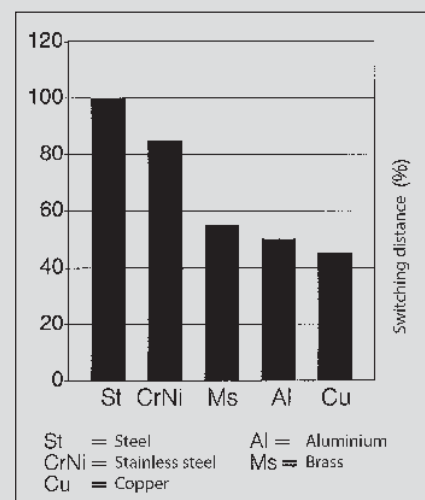


Repeatability

Repeatability is the ability of a sensor to repeatedly detect an object at the same distance away from the sensing surface. The typical deviation is < 5 %.

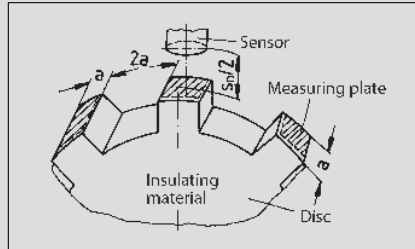
Reduction factors

The definition of the sensing distance is based on the measurement performed with a standardised square target made of steel. If other materials with the same dimensions are used, the sensing distance will be reduced as shown in the following graphic.



Switching frequency

The switching frequency is measured with a rotating, non-conductive plate, on which the standard targets are mounted as illustrated (size of targets as previously defined).



The distance between the targets and sensor is equal to half the nominal sensing distance. The maximum switching frequency is reached when the switch-on or switch-off signal time drops below 50 µs.

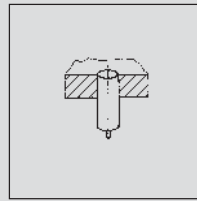
Temperature range

For most sensors, the permissible ambient temperature range is between -25 °C and +70 °C (-13 °F to +158 °F). Sensors with an extended temperature range of -40 °C to +100 °C are also available.

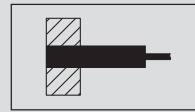
Assembly

Inductive sensors contain a coil on a ferromagnetic core that bundles the electromagnetic alternating field. The core is installed into the enclosure in such a way that the field emerges from the switch at the active face. A part of the magnetic field, however, also emerges from the side of the core. The sensor in a flush mount arrangement would already be influenced by the metal on the sides. For this reason, a metal band is fitted about the core in plastic enclosures, thus restricting the lateral magnetic field in a flush mount configuration. Due to the pre-attenuation attributed to the metal ring or a metal enclosure, flush mount versions have a shorter sensing distance than non-flush mount sensors and can be mounted closer to each other.

Flush mount

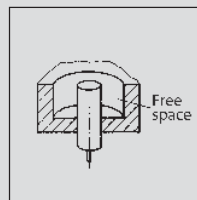


The active face can be flush with a metal surface.

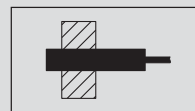


Catalogue symbol for flush mount

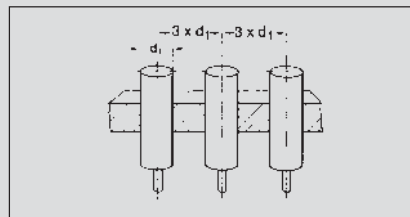
Non-flush mount



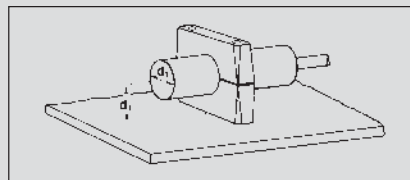
Sensors for non-flush mount require a clearance equal to three times the sensor enclosure diameter and a min. depth of 2x Sn.



Catalogue symbol for non-flush mount



Minimum spacing between non-flush mount sensors



Installation with a mounting bracket parallel to a steel wall

NAMUR sensors

(Standardization association for measurement and control in chemical industries)

Protection class

Corresponding to their ID code, the enclosures are dustproof and waterproof in accordance with IP 65 or IP 67 (EN 60529).

Short-circuit protection

Standard sensors are protected against short-circuit (cyclic) and polarity reversal.

Tightening torque requirements

BERNSTEIN supplies corresponding mounting nuts with its sensors. Refer to the respective datasheets for the required tightening torque.

Tightening torque examples for sensors in brass enclosure:

M4	0.8 Nm
M5	1.5 Nm
M8	8 Nm
M12	10 Nm
M18	25 Nm
M30	70 Nm

Materials

The sensors are protected by a glass fibre reinforced thermoplastic, brass or stainless steel enclosure. The connection cable has a PVC or PU sheathing.

Connection systems

The following connection systems are available for standard sensors:

- Cable variants (2 m) with PVC or PUR sheathing
- Connector variants with M8, M12 connector or connector conforming to DIN 43650
- Quick-connect system with Ultralock connectors

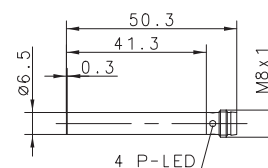
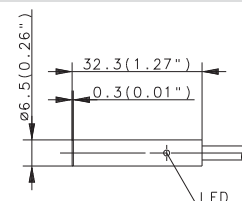
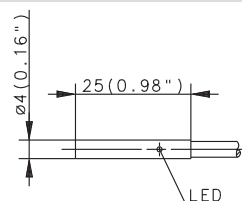
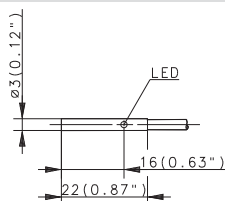
Standards and approvals

All sensors are CE-certified. The following European standards apply in accordance with CENELEC:

- EN 60947-5-2 Proximity switches
- EN 60947-5-6 NAMUR sensors

Inductive Sensors (Type Ø 3 mm, Ø 4 mm, Ø 6.5 mm, M4, M5)

Type	Ø 3 mm	Ø 4 mm	Ø 6.5 mm
Type of installation	Flush	Flush	Flush
Nominal sensing distance	0.6 mm	0.8 mm	1.5 mm
Type of connection	Cable 2 m	Cable 2 m	Cable 2 m
Special feature			Connector M8



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6502999019 KIB-D03PS/0,6-KL2PU 6502799007 KIB-D03PÖ/0,6-KL2PU	6502999004 KIB-D04NS/0,8-KL2PU 6502799002 KIB-D04PÖ/0,8-KL2PU	6502999010 KIB-D06PS/1,5-KL2 6502799011 KIB-D06PÖ/1,5-KL2	6502999012 KIB-D06PS/1,5-KLSM8
NPN	DC	NO contact Type NC contact Antivalent NO/NC		6502399004 KIB-D04NS/0,8-KL2PU		
PNP/NPN	DC	NO/NC prog. push-pull operation				
NAMUR	DC	Type				
Analogue	DC					
2-wire	DC	NO contact NC contact				
	AC	NO contact NC contact Changeover contact				

Technical data

Rated operating voltage	U_B	10–30 VDC	10–30 VDC	10–36 VDC	10–36 VDC
Rated operating current	I_B	≤ 100 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	3000 Hz	3000 Hz	1000 Hz	1000 Hz
Short circuit-protection		Cyclic	Cyclic	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable					

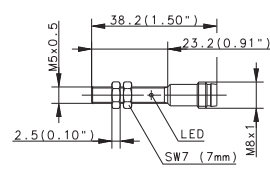
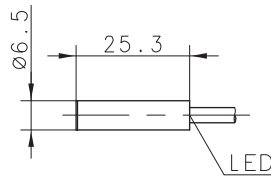
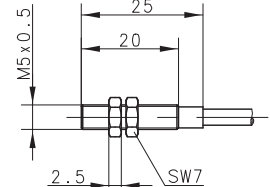
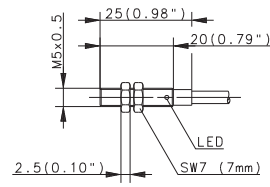
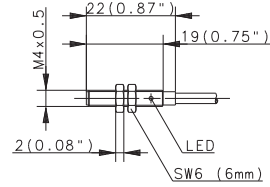
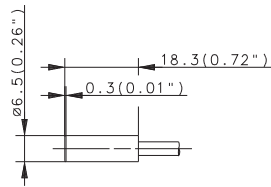
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67
Enclosure material	Stainless steel 1.4305	Stainless steel 1.4401	Stainless steel 1.4401	Stainless steel 1.4401
Connection	3 x 0.055 mm ²	3 x 0.14 mm ²	3 x 0.14 mm ²	M8 x 1

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



Ø 6.5 mm		M4	M5	M5
Flush	Flush	Flush	Flush	Flush
1.5 mm	1.5 mm	0.6 mm	1 mm	1 mm
Cable 2 m	Cable 5 m	Cable 2 m	Cable 2 m	Cable 2 m
			Connector M8	NAMUR



6502999034 KIB-D06PS/1,5-K2VPU	6602999460 KIB-D06PS/1,5-KLSV	6502999020 KIB-M04PS/0,6-KL2PU		6502999003 KIB-M05NS/001-KL2PU 6502799001 KIB-M05PÖ/001-KL2PU	6502999018 KIB-M05PS/001-KLSM8 6502799019 KIB-M05PÖ/001-KLSM8		
				6502399003 KIB-M05NS/001-KL2PU			
						6501699008 KIB-M05EA/001-2	

10–36 VDC	10–36 VDC	10–30 VDC	10–30 VDC	10–30 VDC	5–25 VDC
≤ 200 mA	≤ 200 mA	≤ 100 mA	≤ 200 mA	≤ 200 mA	–
1000 Hz	1000 Hz	3000 Hz	3000 Hz	3000 Hz	≈ 3 kHz
Cyclic	Cyclic	Cyclic	Cyclic	Cyclic	–
–/–	LED/–	LED/–	LED/–	LED/–	–/–

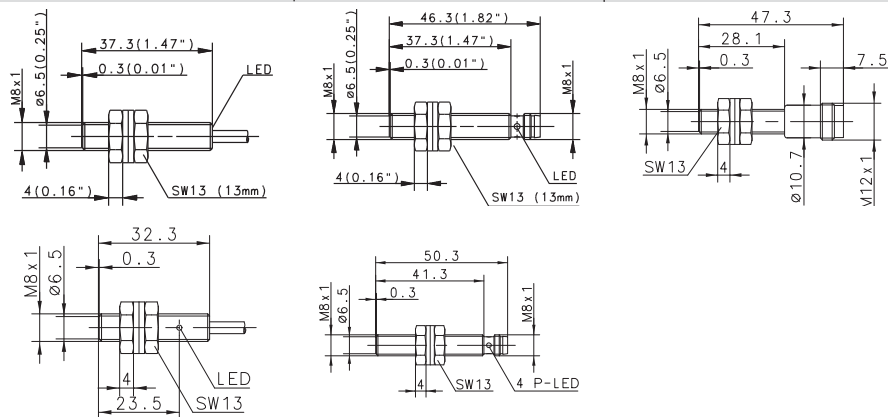
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
IP67	IP67	IP67	IP67	IP67	IP67
Stainless steel 1.4401	Stainless steel 1.4401	Stainless steel 1.4305	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
3 x 0.14 mm ²	3 x 0.14 mm ²	3 x 0.055 mm ²	3 x 0.14 mm ²	M8 x 1	2 x 0.14 mm ²

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M8)

Type	M8		M8		M8
Type of installation	Flush	Flush	Flush	Flush	Flush
Nominal sensing distance	1.5 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
Type of connection	Cable 2 m	Cable 6 m	Connector M8	Connector M8	Connector M12
Special feature					



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6932901001 KIB-M08PS/1,5-KL2	6502901004 KIB-M08PS/1,5-KL6 6502701001 KIB-M08PÖ/1,5-KL2	6932942001 KIB-M08PS/1,5-KLSM8 6502742001 KIB-M08PÖ/1,5-KLSM8	6502942007 KIB-M08PS/0,1-KS12
NPN	DC	NO contact Type NC contact Antivalent NO/NC	6932301001 KIB-M08NS/1,5-KL2		6932342001 KIB-M08PS/1,5-KLSM8	
PNP/NPN	DC	NO/NC prog. push-pull operation				
NAMUR	DC	Type				
Analogue	DC					
2-wire	DC	NO contact NC contact				
	AC	NO contact NC contact Changeover contact				

Technical data

Rated operating voltage	U_B	10–36 VDC	10–36 VDC	10–36 VDC	10–36 VDC	10–36 VDC
Rated operating current	I_B	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	1000 Hz	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Short circuit-protection		Cyclic	Cyclic	Cyclic	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–	–/–
Sensing distance, adjustable						

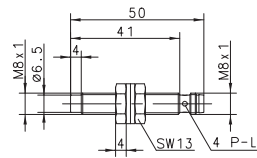
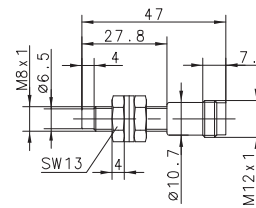
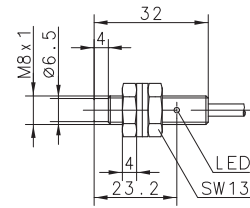
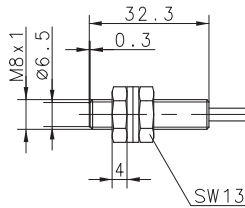
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305
Connection	3 x 0.14 mm ²	3 x 0.14 mm ²	M8 x 1	M8 x 1	M12 x 1

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M8	M8	M8	
Flush	Non-flush	Non-flush	Non-flush
1.5 mm	2 mm	2 mm	2 mm
Cable 2 m	Cable 2 m	Connector M8	Connector M12
NAMUR			



		6502916003 KIN-M08PS/002-KL2	6502942006 KIN-M08PS/002-KLSM8	6502942008 KIN-M08PS/002-KS12		
6501601003 KIB-M08EA/1,5-2						

5-25 VDC	10-36 VDC	10-36 VDC	10-36 VDC	
-	≤ 200 mA	≤ 200 mA	≤ 200 mA	
≈ 1 kHz	750 Hz	750 Hz	750 Hz	
-	Cyclic	Cyclic	Cyclic	
-/-	LED/-	LED/-	-/-	

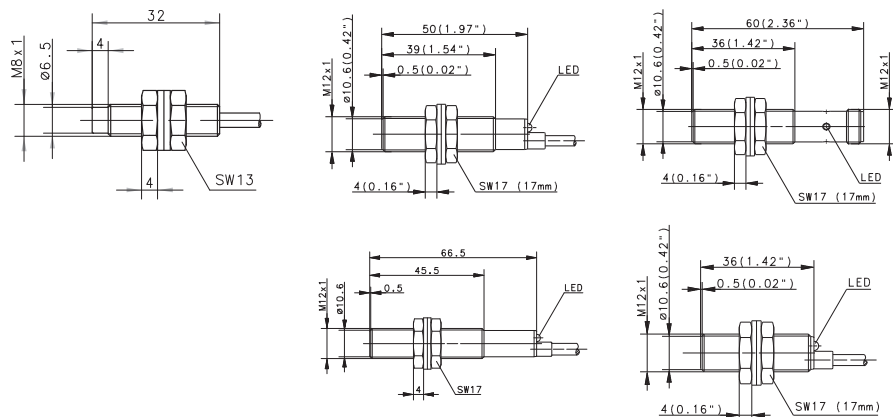
-25°C/+70°C	-25°C/+70°C	-25°C/+70°C	-25°C/+70°C	
IP67	IP67	IP67	IP67	
Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	Stainless steel 1.4305	
2 x 0.25 mm ²	3 x 0.14 mm ²	M8 x 1	M12 x 1	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M8, M12)

Type	M8	M12	M12
Type of installation	Non-flush	Flush	Flush
Nominal sensing distance	2 mm	2 mm	2 mm
Type of connection	Cable 2 m	Cable 2 m	Connector M12
Special feature	NAMUR		Cable 2 m



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6932903001 KIB-M12PS/002-KL2	6932943001 KIB-M12PS/002-KLS12 6602743112 KIB-M12PÖ/002-KLS12	6502903016 KIB-M12PS/002-KL2V 6502703005 KIB-M12PÖ/002-KL2V
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC	6932303001 KIB-M12NS/002-KL2	6932343001 KIB-M12NS/002-KLS12	6502103003 KIB-M12NÖ/002-KL2V
PNP/NPN	DC	NO/NC prog. push-pull operation			
NAMUR	DC	Type			
Analogue	DC				
2-wire	DC	NO contact NC contact			
	AC	NO contact Type NC contact Changeover contact	6501601005 KIN-M08EA/002-2	6503503001 KIB-M12AS/002-L2	

Technical data

Rated operating voltage	U_B	5–25 VDC	10–36 VDC	76–250 V AC	10–36 VDC	10–36 VDC
Rated operating current	I_B	–	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	≈ 1 kHz	800 Hz	≈ 10 Hz	800 Hz	800 Hz
Short circuit-protection		–	Cyclic	–	Cyclic	Cyclic
Function/operating voltage indicator		–/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable						

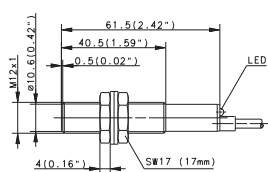
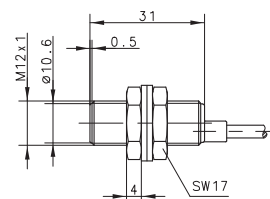
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	Stainless steel 1.4305	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
Connection	2 x 0.25 mm ²	3 x 0.14 mm ²	2 x 0.14 mm ²	M12 x 1	3 x 0.14 mm ²

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M12		M12	M12	
Flush	Flush	Flush	Flush	
2 mm	2 mm	2 mm	2 mm	
Connector M8	Connector M12	Cable 2 m	Cable 2 m	
		4000 Hz	NAMUR	



6502943008 KIB-M12PS/002-KLSM8V	6502943006 KIB-M12PS/002-KS12V 6502743005 KIB-M12PÖ/002-KS12V	6502903012 KIB-M12PS/002-KL2F					
				6501624760 KIB-M12EA/002-2			

10–30 VDC	10–36 VDC	10–60 VDC	5–25 VDC	
≤ 200 mA	≤ 200 mA	≤ 200 mA	–	
800 Hz	800 Hz	4000 Hz	≤ 800 Hz	
Cyclic	Cyclic	Cyclic	–	
LED/–	–/–	LED/–	–/–	

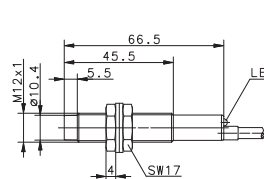
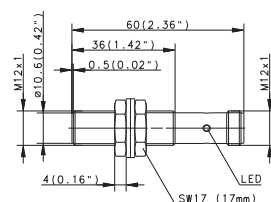
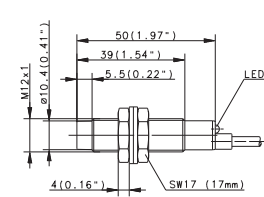
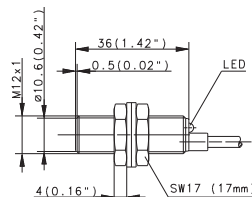
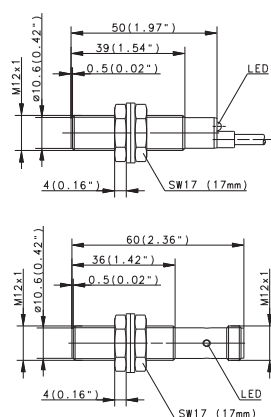
-25°C/+70°C	-25°C/+70°C	-25°C/+70°C	-25°C/+70°C	
IP67	IP67	IP67	IP67	
CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	
M8 x 1	M12 x 1	3 x 0.14 mm ²	2 x 0.25 mm ²	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M12)

Type	M12	M12	M12
Type of installation	Flush	Flush	Non-flush
Nominal sensing distance	4 mm	4 mm	4 mm
Type of connection	Cable 2 m	Cable 2 m	Cable 2 m
Special feature	Sensing dist.	Sensing dist.	Sensing dist.



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6502903025 KIB-M12PS/004-KL2E	6502943015 KIB-M12PS/004-KLS12E	6502903023 KIB-M12PS/004-KL2VE	6932904001 KIN-M12PS/004-KL2 6932704001 KIN-M12PÖ/004-KL2
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC				6932304001 KIN-M12NS/004-KL2 6932104001 KIN-M12NÖ/004-KL2
PNP/NPN	DC	NO/NC prog. push-pull operation				
NAMUR	DC					
Analogue	DC					
2-wire	DC	NO contact NC contact Type NC contact Type Changeover contact				6503504001 KIN-M12AS/004-L2 6503404001 KIN-M12AÖ/004-L2

Technical data

Rated operating voltage	U_B	10–30 VDC	10–36 VDC	10–36 VDC	10–36 VDC	76–250 V AC
Rated operating current	I_B	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	800 Hz	800 Hz	800 Hz	400 Hz	≈ 10 Hz
Short circuit-protection		Cyclic	Cyclic	Cyclic	Cyclic	–
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable						

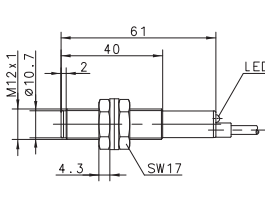
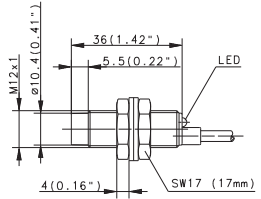
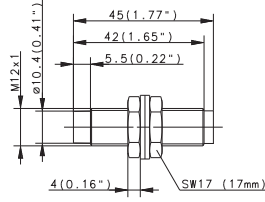
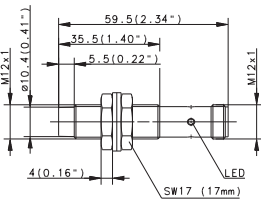
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
Connection	3 x 0.14 mm ²	M12 x 1	3 x 0.14 mm ²	3 x 0.14 mm ²	2 x 0.14 mm ²

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M12		M12			
Non-flush	Non-flush	Non-flush	Non-flush		
4 mm	4 mm	4 mm	4 mm		
Connector M12	Cable 2 m	Connector M12	Cable 2 m		
			Plastic		



6932944001 KIN-M12PS/004-KLS12	6502904014 KIN-M12PS/004-KL2V	6502944006 KIN-M12PS/004-KS12V	6502919001 KIN-T12PS/004-KL2			
6502744003 KIN-M12PÖ/004-KLS12						
6932344001 KIN-M12NS/004-KLS12						

10–36 VDC	10–36 VDC	10–36 VDC	10–30 VDC		
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA		
400 Hz	400 Hz	400 Hz	400 Hz		
Cyclic	Cyclic	Cyclic	Cyclic		
LED/–	LED/–	–/–	LED/–		

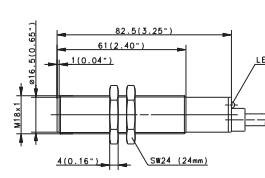
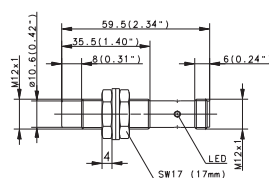
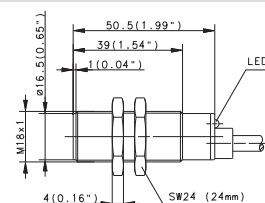
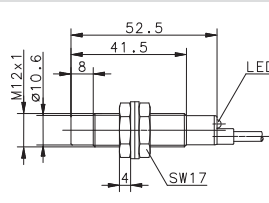
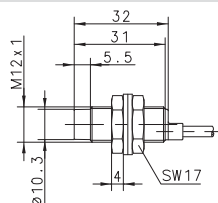
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C		
IP67	IP67	IP67	IP67		
CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	PA, red		
M12 x 1	3 x 0.14 mm ²	M12 x 1	3 x 0.14 mm ²		

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M12, M18)

Type	M12	M12	M12	M18
Type of installation	Non-flush	Non-flush	Non-flush	Flush
Nominal sensing distance	4 mm	8 mm	8 mm	5 mm
Type of connection	Cable 2 m	Cable 2 m	Connector M12	Cable 2 m
Special feature	NAMUR	Sensing dist.	Sensing dist.	Cable 2 m



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC Type		6502904021 KIN-M12PS/008-KL2E	6502944013 KIN-M12PS/008-KLS12E	6932905001 KIB-M18PS/005-KL2 6932705001 KIB-M18PÖ/005-KL2
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC			6602344458 KIN-M12NS/008-KLS12E	6932105001 KIB-M18NÖ/005-KL2
PNP/NPN	DC	NO/NC prog. push-pull operation				
NAMUR	DC	Type	6501625761 KIN-M12EA/004-2			
Analogue	DC					
2-wire	DC	NO contact NC contact				
	AC	NO contact Type NC contact Type Changeover contact				6503505004 KIB-M18AS/005-L2 6503405001 KIB-M18AÖ/005-L2

Technical data

Rated operating voltage	U_B	5–25 VDC	10–36 VDC	10–36 VDC	10–36 VDC	20–250 V AC
Rated operating current	I_B	–	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 400 mA
Switching frequency (max)	F	≤ 400 Hz	400 Hz	400 Hz	500 Hz	≈ 10 Hz
Short circuit-protection		–	Cyclic	Cyclic	Cyclic	–
Function/operating voltage indicator		–/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable						

Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
Connection	2 x 0.25 mm ²	3 x 0.14 mm ²	M12 x 1	3 x 0.5 mm ²	2 x 0.5 mm ²

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



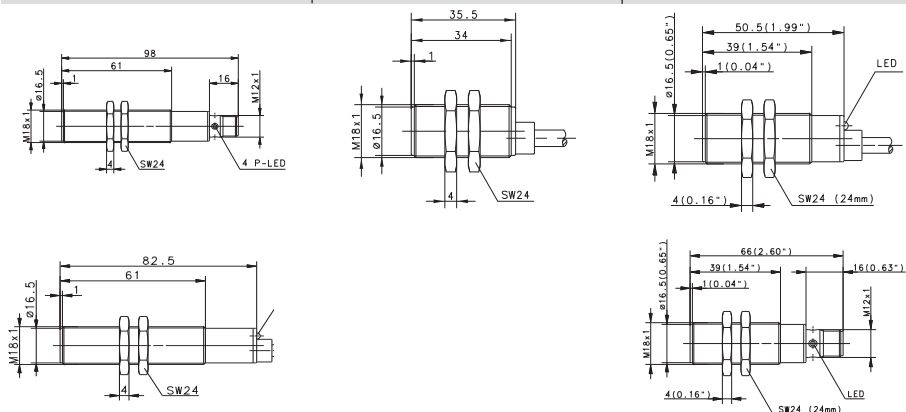
10–36 VDC	10–60 VDC	10–60 VDC	10–60 VDC	10–60 VDC	10–60 VDC	10–60 VDC	24–250 V AC
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
500 Hz	500 Hz	500 Hz	500 Hz	500 Hz	500 Hz	500 Hz	≤ 10 Hz
Cyclic	Cyclic	Cyclic	–	Cyclic	Cyclic	Cyclic	–
LED/–	LED/–	–/–	LED/–	LED/–	–/–	LED/–	LED/–

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M18)

Type	M18	M18	M18
Type of installation	Flush	Flush	Flush
Nominal sensing distance	5 mm	5 mm	8 mm
Type of connection	Connector M12	Cable 2 m	Cable 2 m
Special feature	Temperature	Temperature	Temperature



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC Type	6502940006 KIB-M18PS/005-KLS12T	6502905023 KIB-M18PS/005-KL2PUT		6502905022 KIB-M18PS/008-KL2E	6502940005 KIB-M18PS/008-KLS12E
NPN	DC	NO contact Type NC contact Antivalent NO/NC Type					
PNP/NPN	DC	NO/NC prog. push-pull operation					
NAMUR	DC	Type		6501626762 KIB-M18EA/005-2			
Analogue	DC						
2-wire	DC	NO contact NC contact					
	AC	NO contact Type NC contact Type Changeover contact					

Technical data

Rated operating voltage	U_B	10–30 VDC	10–30 VDC	5–25 VDC	10–36 VDC	10–36 VDC
Rated operating current	I_B	≤ 200 mA	≤ 200 mA	–	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	500 Hz	500 Hz	≤ 400 Hz	500 Hz	500 Hz
Short circuit-protection		Cyclic	Cyclic	–	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	LED/–	–/–	LED/–	LED/–
Sensing distance, adjustable						

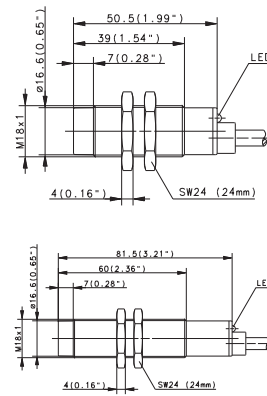
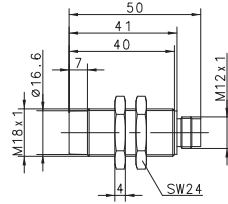
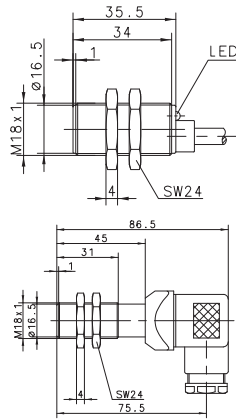
Mechanical data

Ambient temperature (min/max)	–40°C/+100°	–40°C/+100°	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
Connection	M12 x 1	3 x 0.5 mm ²	2 x 0.5 mm ²	3 x 0.5 mm ²	M12 x 1

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M18		M18		M18	
Flush	Flush	Flush	Non-flush	Non-flush	
8 mm	8 mm	8 mm	8 mm	8 mm	
Cable 2 m	DIN Connector	Connector M12	Cable 2 m	Cable 2 m	
Sensing dist.	Sensing dist.	Sensing dist.			



6502905010 KIB-M18PS/008-KL2VE		6502906009 KIB-M18PS/008-KS12V		6932906001 KIN-M18PS/008-KL2 6932706001 KIN-M18PÖ/008-KL2		
	6602840128 KIB-M18PU/008-KSDVE					
				6932306001 KIN-M18NS/008-KL2		
					6503506002 KIN-M18AS/008-L2 6503406001 KIN-M18AÖ/008-L2	

10–36 VDC	12–48 VDC	10–60 VDC	10–36 VDC	20–250 V AC	
≤ 200 mA	≤ 400 mA	≤ 200 mA	≤ 200 mA	≤ 400 mA	
500 Hz	500 Hz	200 Hz	200 Hz	≈ 10 Hz	
Cyclic	–	Cyclic	Cyclic	–	
LED/–	–/–	–/–	LED/–	LED/–	

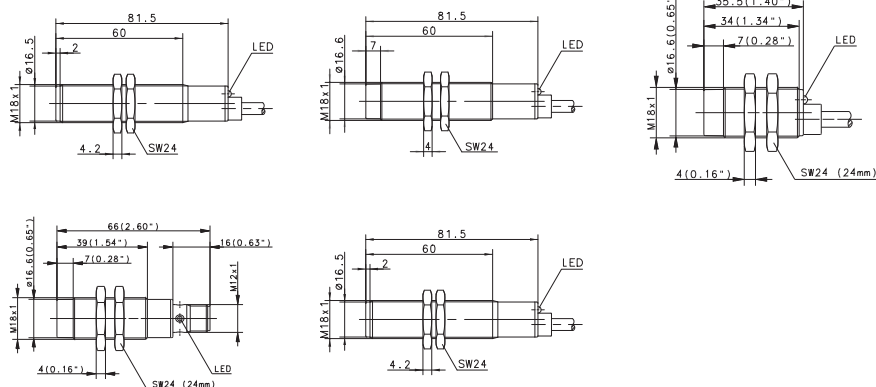
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	
IP67	IP65	IP67	IP67	IP67	
CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	
3 x 0.5 mm ²	DIN 43650	M12 x 1	3 x 0.5 mm ²	2 x 0.5 mm ²	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M18)

Type	M18		M18		M18
Type of installation	Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
Nominal sensing distance	8 mm	8 mm	8 mm	8 mm	8 mm
Type of connection	Cable 2 m	Connector M12	Cable 2 m	Cable 2 m	Cable 2 m
Special feature	Plastic		Plastic		



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC Type	6932906004 KIN-M18PS/008-KLS12 6932706002 KIN-M18PÖ/008-KLS12	6502921975 KIN-T18PS/008-KL2	6502906006 KIN-M18PS/008-KL2V 6502706002 KIN-M18PÖ/008-KL2V
NPN	DC	NO contact Type NC contact Antivalent NO/NC	6932306004 KIN-M18NS/008-KLS12		6502306004 KIN-M18NS/008-KL2V
PNP/NPN	DC	NO/NC prog. push-pull operation			
NAMUR	DC				
Analogue	DC				
2-wire	DC	NO contact NC contact Type	6503521705 KIN-T18AS/008-L2 6503421704 KIN-T18AÖ/008-L2	6501306001 KIN-M18ZS/008-L2	
	AC	NO contact Type NC contact Type Changeover contact			

Technical data

Rated operating voltage	U_B	24–250 V AC	10–36 VDC	10–60 VDC	10–60 VDC	10–60 VDC
Rated operating current	I_B	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	≈ 10 Hz	200 Hz	200 Hz	200 Hz	200 Hz
Short circuit-protection		–	Cyclic	–	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable						

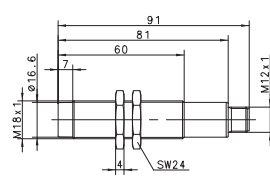
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	PA, red	CuZn39Pb3	CuZn39Pb3	PA, red	CuZn39Pb3
Connection	2 x 0.5 mm ²	M12 x 1	2 x 0.5 mm ²	3 x 0.5 mm ²	3 x 0.5 mm ²

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M18		M18	M18		
Non-flush 8 mm DIN Connector	Non-flush 8 mm DIN Connector	Non-flush 8 mm Connector M12 Ultralock	Non-flush 8 mm Cable 2 m	Non-flush 8 mm Connector M12	



6502941001 KIN-M18PS/008-KLSD 6502741001 KIN-M18PÖ/008-KLSD 6602841421 KIN-M18PU/008-KSD							
		6502306011 KIN-M18NS/008-KLS12U					
				6502006001 KIN-M18PA/008-2	6602006111 KIN-M18PA/008-S12		

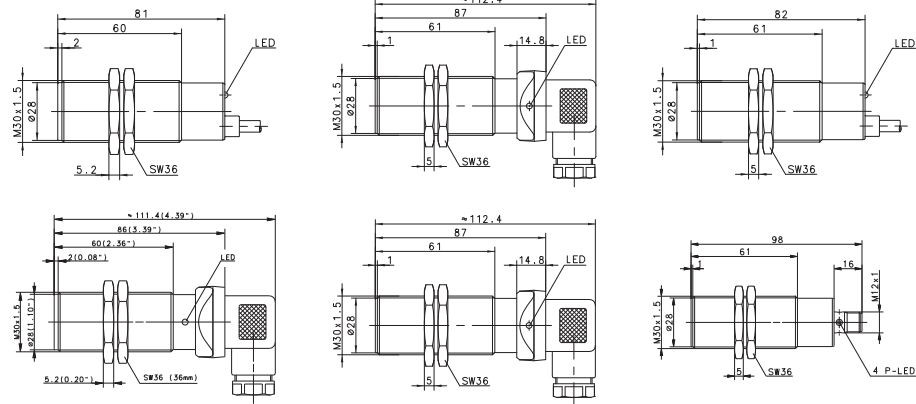
10–60 VDC	10–60 VDC	10–36 VDC	10–36 VDC	10–36 VDC	
≤ 200 mA	≤ 200 mA	≤ 200 mA	–	–	
200 Hz	200 Hz	200 Hz	–	–	
Cyclic	–	Cyclic	Cyclic	–	
LED/–	–/–	LED/–	–/–	–/–	

-25°C/+70°C	-40°C/+80°C	-25°C/+70°C	-25°C/+70°C	-25°C/+70°C	
IP65	IP65	IP67	IP67	IP67	
CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	
DIN 43650	DIN 43650	M12 x 1	3 x 0.5 mm²	M12 x 1	

You will find detailed data sheets to the products under www.bernstein.eu



M30		M30		M30		
Flush	Flush	Flush	Flush	Flush	Flush	
10 mm	10 mm	10 mm	10 mm	10 mm	10 mm	
Cable 2 m	DIN Connector	DIN Connector	DIN Connector	Cable 2 m	Connector M12	
Plastic	Plastic			Temperature	Temperature	



6502722708 KIB-T30PÖ/010-KL2		6502939001 KIB-M30PS/010-KLSD		6502907013 KIB-M30PS/010-KL2PUT	6502939006 KIB-M30PS/010-KLS12T		
	6502822862 KIB-T30PP/010-KLSD						
			6503535960 KIB-M30AS/010-LSD 6503435959 KIB-M30AÖ/010-LSD				

10–60 VDC	10–60 VDC	10–60 VDC	20–265 V AC	10–30 VDC	10–30 VDC	
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 500 mA	≤ 200 mA	≤ 200 mA	
300 Hz	300 Hz	300 Hz	20 Hz	300 Hz	300 Hz	
Cyclic	Cyclic	Cyclic	–	Cyclic	Cyclic	
LED/–	LED/–	LED/–	LED/–	LED/–	LED/–	

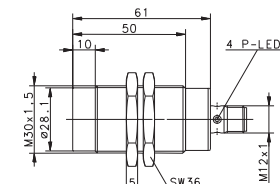
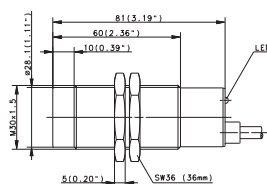
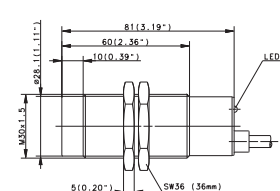
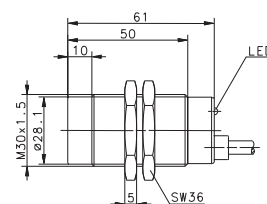
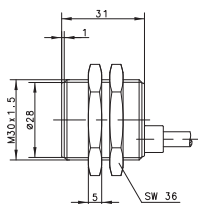
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–40°C/+100°	–40°C/+100°	
IP67	IP65	IP65	IP65	IP67	IP67	
PA, red	PA, red	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	
3 x 0.5 mm ²	DIN 43650	DIN 43650	DIN 43650	3 x 0.5 mm ²	M12 x 1	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type M30)

Type	M30	M30	M30
Type of installation	Flush	Non-flush	Non-flush
Nominal sensing distance	10 mm	15 mm	15 mm
Type of connection	Cable 2 m	Cable 2 m	Cable 2.5 m
Special feature	NAMUR		Connector M12



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC Type	6932908001 KIN-M30PS/015-KL2	6502908002 KIN-M30PS/015-KL2	6932908002 KIN-M30PS/015-KLS12 6602308459 KIN-M30NS/015-KLS12
NPN	DC	NO contact Type NC contact Antivalent NO/NC Type		6502808001 KIN-M30PU/015-KL2	
PNP/NPN	DC	NO/NC prog. Type push-pull operation		6502308001 KIN-M30NS/015-KL2	
NAMUR	DC	Type	6501699012 KIB-M30EA/010-2		
Analogue	DC	Type			
2-wire	DC	NO contact NC contact			
	AC	NO contact Type NC contact Changeover contact			6503508246 KIN-M30AS/015-L2,5

Technical data

Rated operating voltage	U_B	5–25 VDC	10–36 VDC	10–60 VDC	20–250 V AC	10–36 VDC
Rated operating current	I_B	–	≤ 200 mA	≤ 200 mA	≤ 400 mA	≤ 200 mA
Switching frequency (max)	F	≤ 300 Hz	100 Hz	100 Hz	≈ 10 Hz	100 Hz
Short circuit-protection		–	Cyclic	Cyclic	–	Cyclic
Function/operating voltage indicator		–/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable						

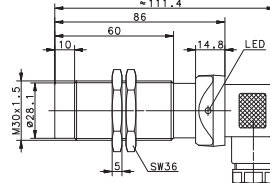
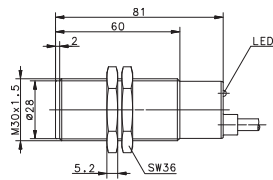
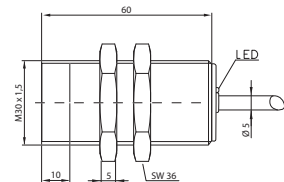
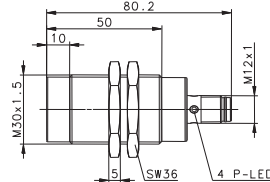
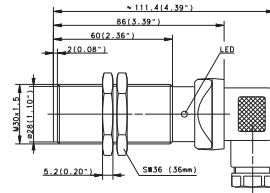
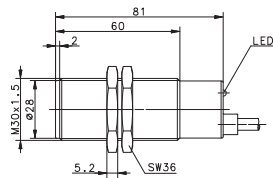
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
Connection	2 x 0.5 mm ²	3 x 0.5 mm ²	3 x 0.5 mm ²	2 x 0.5 mm ²	M12 x 1

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



M30		M30		M30	M30
Non-flush	Non-flush	Non-flush	Non-flush	Non-flush	Non-flush
15 mm	15 mm	15 mm	15 mm	15 mm	40 mm
Cable 2 m	Cable 2.5 m	DIN Connector	DIN Connector	Connector M12	Cable 2 m
Plastic	Plastic	Plastic		Analogue	Sensing dist.



6502923981 KIN-T30PS/015-KL2			6502935001 KIN-M30PS/015-KLSD			6502908009 KIN-M30PS/040-KL2E	
		6502836860 KIN-T30PP/015-KLSD					
				6502008001 KIN-M30PA/015-2			
	6503523956 KIN-T30AS/015-L2,5						

10–60 VDC	20–250 V AC	10–60 VDC	10–60 VDC	10–36 VDC	10–30 VDC
≤ 200 mA	≤ 400 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
100 Hz	≈ 10 Hz	100 Hz	100 Hz	100 Hz	≤ 100 Hz
Cyclic	–	Cyclic	Cyclic	Cyclic	Cyclic
LED/–	LED/–	LED/–	LED/–	LED/–	LED/–

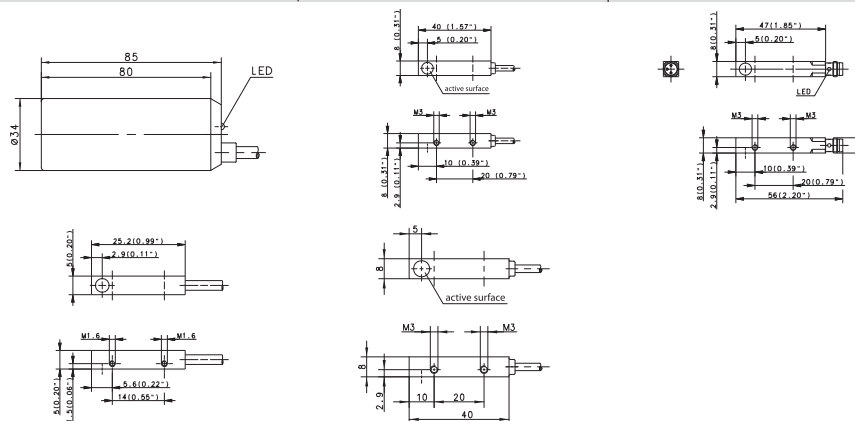
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
IP67	IP67	IP65	IP65	IP67	IP67
PA, red	PA, red	PA, red	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3
3 x 0.5 mm ²	2 x 0.5 mm ²	DIN 43650	DIN 43650	M12 x 1	3 x 0.34 mm ²

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type Ø 34 mm, 5 x 5, 8 x 8, 12 x 12, 27 x 10, 28 x 16)

Type	Ø 34 mm	5 x 5 x 25 mm	8 x 8 x 40 mm		8 x 8 x 56 mm
Type of installation	Non-flush	Flush	Flush	Flush	Flush
Nominal sensing distance	20.0 mm	1.5 mm	1.5 mm	1.5 mm	1.5 mm
Type of connection	Cable 2 m	Cable	Cable 2 m	Cable 2 m	Connector M8
Special feature					



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6502915002 KIN-R34PS/020-KL2	6502999026 KIB-Q05PS/001-K2PU 6502799010 KIB-Q05PÖ/001-K2PU	6502980004 KIB-Q08PS/1,5-K2 6502780001 KIB-Q08PÖ/1,5-K2	6602980087 KIB-Q08PS/1,5-K2T	6502980002 KIB-Q08PS/1,5-KLSM8 6502780002 KIB-Q08PÖ/1,5-KLSM8	
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC						
PNP/NPN	DC	NO/NC prog. Type push-pull operation	6502915001 KIN-R34PP/020-KLSD					
NAMUR	DC							
Analogue	DC							
2-wire	DC	NO contact NC contact						
	AC	NO contact NC contact Changeover contact						

Technical data

Rated operating voltage	U_b	10–60 VDC	10–30 VDC	10–36 VDC	10–36 VDC	10–36 VDC
Rated operating current	I_b	≤ 200 mA	200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching frequency (max)	F	100 Hz	1000 Hz	1000 Hz	1000 Hz	1000 Hz
Short circuit-protection		Cyclic	Cyclic	Cyclic	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	–/–	–/–	–/–	LED/–
Sensing distance, adjustable						

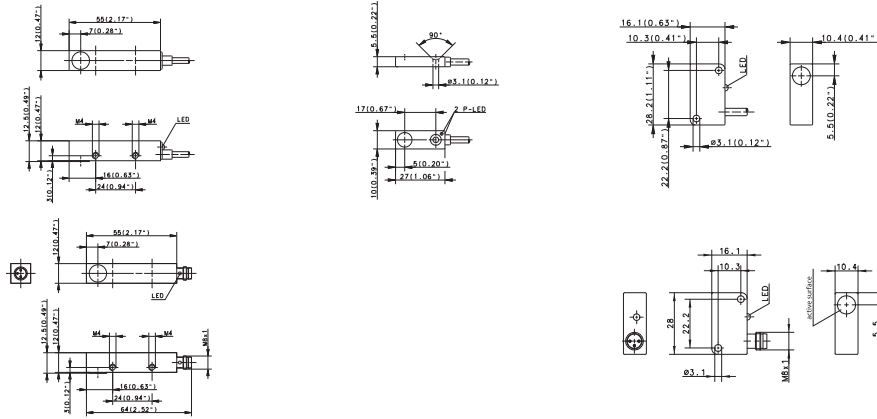
Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	0°C/+100°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67
Enclosure material	PBT, red	CuZn39PB3	CuZn39PB3	CuZn39PB3	CuZn39PB3
Connection	3 x 0.5 mm ²	3 x 0.05 mm ²	3 x 0.14 mm ²	3 x 0.14 mm ²	M8 x 1

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



12 x 12 x 55 mm		27 x 10 x 5 mm	28 x 16 x 11 mm	
Flush	Flush	Flush	Flush	Flush
4 mm	4 mm	1.5 mm	2 mm	2 mm
Cable 2 m	Connector M8	Cable 2 m	Cable 2 m	Connector M8



6502999028 KIB-Q12PS/004-KL2E	6502999030 KIB-Q12PS/004-KLSM8E	6502993001 KIB-E27PS/1,5-KL2PU	6502973001 KIB-E28PS/002-KL2	6502973002 KIB-E28PS/002-KLSM8 6502773001 KIB-E28PÖ/002-KLSM8		
	6502399021 KIB-Q12NS/004-KLSM8E					

10–60 VDC	10–60 VDC	10–30 VDC	10–30 VDC	10–30 VDC	
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	
800 Hz	800 Hz	1000 Hz	800 Hz	800 Hz	
Cyclic	Cyclic	Cyclic	Cyclic	Cyclic	
LED/–	LED/–	LED/–	LED/–	LED/–	

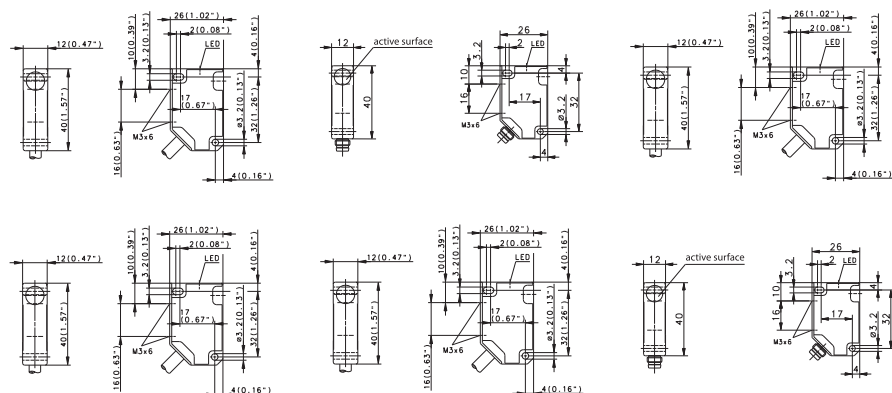
–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	
IP67	IP67	IP67	IP67	IP67	
CuZn39Pb3	CuZn39Pb3	PA, black	PA, black	PA, black	
3 x 0.14 mm ²	M8 x 1	3 x 0.14 mm ²	3 x 0.14 mm ²	M8 x 1	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type 28 x 16 mm, 40 x 26 mm, 50 x 25 mm, 60 x 36 mm)

Type	40 x 26 x 12 mm		40 x 26 x 12 mm		40 x 26 x 12 mm	
Type of installation	Flush	Flush	Flush	Non-flush	Non-flush	Non-flush
Nominal sensing distance	2 mm	2 mm	2 mm	4 mm	4 mm	4 mm
Type of connection	Cable 2 m	Cable 2 m	Connector M8	Cable 2 m	Cable 2 m	Connector M8
Special feature						



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC Type	6502984023 KIB-E40PS/002-KL2 6502784006 KIB-E40PÖ/002-KL2	6502984025 KIB-E40PS/002-KLSM8	6502984024 KIN-E40PS/004-KL2 6502784007 KIN-E40PÖ/004-KL2	6502984026 KIN-E40PS/004-KLSM8 6502784008 KIN-E40PÖ/004-KLSM8
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC				
PNP/NPN	DC	NO/NC prog. Type push-pull operation				
NAMUR	DC	Type				
Analogue	DC	Type				
2-wire	DC	NO contact NC contact				
	AC	NO contact Type NC contact Changeover contact	6503584004 KIB-E40AS/002-L2		6503584005 KIN-E40AS/004-L2	

Technical data

Rated operating voltage	U_B	10–36 VDC	20–250 V AC	10–36 VDC	10–36 VDC	20–250 V AC	10–36 VDC
Rated operating current	I_B	≤ 200 mA	≤ 300 mA	≤ 200 mA	≤ 200 mA	≤ 300 mA	≤ 200 mA
Switching frequency (max)	F	800 Hz	10 Hz	800 Hz	400 Hz	10 Hz	400 Hz
Short circuit-protection		Cyclic	–	Cyclic	Cyclic	–	Cyclic
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable							

Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP67	IP67	IP67	IP67	IP67
Enclosure material	PBT, black	PBT, black	PBT, black	PBT, black	PBT, black	PBT, black	PBT, black
Connection	3 x 0.5 mm ²	2 x 0.5 mm ²	M8 x 1	3 x 0.5 mm ²	2 x 0.5 mm ²	M8 x 1	

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.



Technical drawings of the LED module showing top, side, and front views with dimensions in mm.

Top View:

- Overall width: 60 mm
- Overall height: 28 mm
- Distance between LED chips: 38.8 mm
- Distance from left edge to first LED chip: 13.5 mm
- Distance from left edge to second LED chip: 10.1 mm
- Distance from left edge to third LED chip: 20.3 mm
- Distance from left edge to fourth LED chip: 53.9 mm
- Distance from left edge to fifth LED chip: 14.2 mm
- Distance from left edge to sixth LED chip: 20.3 mm
- Distance from left edge to seventh LED chip: 10.1 mm
- Distance from left edge to eighth LED chip: 13.5 mm
- Distance from left edge to ninth LED chip: 38.8 mm
- Distance from left edge to tenth LED chip: 13.5 mm
- Distance from left edge to eleventh LED chip: 10.1 mm
- Distance from left edge to twelfth LED chip: 20.3 mm
- Distance from left edge to thirteenth LED chip: 53.9 mm
- Distance from left edge to fourteenth LED chip: 14.2 mm
- Distance from left edge to fifteenth LED chip: 20.3 mm
- Distance from left edge to sixteenth LED chip: 10.1 mm
- Distance from left edge to seventeenth LED chip: 13.5 mm
- Distance from left edge to eighteenth LED chip: 38.8 mm
- Distance from left edge to nineteenth LED chip: 13.5 mm
- Distance from left edge to twentieth LED chip: 10.1 mm
- Distance from left edge to twenty-first LED chip: 20.3 mm
- Distance from left edge to twenty-second LED chip: 53.9 mm
- Distance from left edge to twenty-third LED chip: 14.2 mm
- Distance from left edge to twenty-fourth LED chip: 20.3 mm
- Distance from left edge to twenty-fifth LED chip: 10.1 mm
- Distance from left edge to twenty-sixth LED chip: 13.5 mm
- Distance from left edge to twenty-seventh LED chip: 38.8 mm
- Distance from left edge to twenty-eighth LED chip: 13.5 mm
- Distance from left edge to twenty-ninth LED chip: 10.1 mm
- Distance from left edge to thirtieth LED chip: 20.3 mm
- Distance from left edge to thirty-first LED chip: 53.9 mm
- Distance from left edge to thirty-second LED chip: 14.2 mm
- Distance from left edge to thirty-third LED chip: 20.3 mm
- Distance from left edge to thirty-fourth LED chip: 10.1 mm
- Distance from left edge to thirty-fifth LED chip: 13.5 mm
- Distance from left edge to thirty-sixth LED chip: 38.8 mm
- Distance from left edge to thirty-seventh LED chip: 13.5 mm
- Distance from left edge to thirty-eighth LED chip: 10.1 mm
- Distance from left edge to thirty-ninth LED chip: 20.3 mm
- Distance from left edge to fortieth LED chip: 53.9 mm
- Distance from left edge to forty-first LED chip: 14.2 mm
- Distance from left edge to forty-second LED chip: 20.3 mm
- Distance from left edge to forty-third LED chip: 10.1 mm
- Distance from left edge to forty-fourth LED chip: 13.5 mm
- Distance from left edge to forty-fifth LED chip: 38.8 mm
- Distance from left edge to forty-sixth LED chip: 13.5 mm
- Distance from left edge to forty-seventh LED chip: 10.1 mm
- Distance from left edge to forty-eighth LED chip: 20.3 mm
- Distance from left edge to forty-ninth LED chip: 53.9 mm
- Distance from left edge to fiftieth LED chip: 14.2 mm
- Distance from left edge to fifty-first LED chip: 20.3 mm
- Distance from left edge to fifty-second LED chip: 10.1 mm
- Distance from left edge to fifty-third LED chip: 13.5 mm
- Distance from left edge to fifty-fourth LED chip: 38.8 mm
- Distance from left edge to fifty-fifth LED chip: 13.5 mm
- Distance from left edge to fifty-sixth LED chip: 10.1 mm
- Distance from left edge to fifty-seventh LED chip: 20.3 mm
- Distance from left edge to fifty-eighth LED chip: 53.9 mm
- Distance from left edge to fifty-ninth LED chip: 14.2 mm
- Distance from left edge to sixtieth LED chip: 20.3 mm
- Distance from left edge to sixty-first LED chip: 10.1 mm
- Distance from left edge to sixty-second LED chip: 13.5 mm
- Distance from left edge to sixty-third LED chip: 38.8 mm
- Distance from left edge to sixty-fourth LED chip: 13.5 mm
- Distance from left edge to sixty-fifth LED chip: 10.1 mm
- Distance from left edge to sixty-sixth LED chip: 20.3 mm
- Distance from left edge to sixty-seventh LED chip: 53.9 mm
- Distance from left edge to sixty-eighth LED chip: 14.2 mm
- Distance from left edge to sixty-ninth LED chip: 20.3 mm
- Distance from left edge to seventieth LED chip: 10.1 mm
- Distance from left edge to seventy-first LED chip: 13.5 mm
- Distance from left edge to seventy-second LED chip: 38.8 mm
- Distance from left edge to seventy-third LED chip: 13.5 mm
- Distance from left edge to seventy-fourth LED chip: 10.1 mm
- Distance from left edge to seventy-fifth LED chip: 20.3 mm
- Distance from left edge to seventy-sixth LED chip: 53.9 mm
- Distance from left edge to seventy-seventh LED chip: 14.2 mm
- Distance from left edge to seventy-eighth LED chip: 20.3 mm
- Distance from left edge to seventy-ninth LED chip: 10.1 mm
- Distance from left edge to eightieth LED chip: 13.5 mm
- Distance from left edge to eighty-first LED chip: 38.8 mm
- Distance from left edge to eighty-second LED chip: 13.5 mm
- Distance from left edge to eighty-third LED chip: 10.1 mm
- Distance from left edge to eighty-fourth LED chip: 20.3 mm
- Distance from left edge to eighty-fifth LED chip: 53.9 mm
- Distance from left edge to eighty-sixth LED chip: 14.2 mm
- Distance from left edge to eighty-seventh LED chip: 20.3 mm
- Distance from left edge to eighty-eighth LED chip: 10.1 mm
- Distance from left edge to eighty-ninth LED chip: 13.5 mm
- Distance from left edge to ninetieth LED chip: 38.8 mm
- Distance from left edge to ninety-first LED chip: 13.5 mm
- Distance from left edge to ninety-second LED chip: 10.1 mm
- Distance from left edge to ninety-third LED chip: 20.3 mm
- Distance from left edge to ninety-fourth LED chip: 53.9 mm
- Distance from left edge to ninety-fifth LED chip: 14.2 mm
- Distance from left edge to ninety-sixth LED chip: 20.3 mm
- Distance from left edge to ninety-seventh LED chip: 10.1 mm
- Distance from left edge to ninety-eighth LED chip: 13.5 mm
- Distance from left edge to ninety-ninth LED chip: 38.8 mm
- Distance from left edge to one hundred LED chip: 13.5 mm

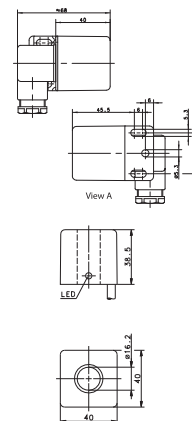
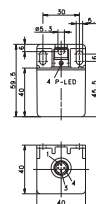
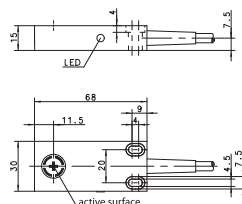
10–60 VDC	10–60 VDC	10–60 VDC	10–60 VDC	10–60 VDC	
≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 200 mA	≤ 400 mA	
500 Hz	500 Hz	200 Hz	200 Hz	200 Hz	
Cyclic	Cyclic	Cyclic	Cyclic	Cyclic	
LED/–	LED/–	LED/–	LED/–	LED/–	

You will find detailed data sheets to the products under www.bernstein.eu



Inductive Sensors (Type 68 x 30 mm, 40 x 40 mm)

Type	68 x 30 x 15 mm	40 x 40 mm	40 x 40 mm
Type of installation	Non-flush	Non-flush	Non-flush
Nominal sensing distance	7 mm	20 mm	15 mm
Type of connection	Cable 2 m	Connector M12	DIN Connector
Special feature			Non-flush 0 mm Cable 6 m Ring sensor



PNP	DC	NO contact Type NC contact Type Antivalent NO/NC	6502956076 KIN-E68PS/007-KL2	6502982003 KIN-N40PS/020-KLS12	6502999036 KIR-N40PS/000-KL6
NPN	DC	NO contact Type NC contact Type Antivalent NO/NC	6502156058 KIN-E68NÖ/007-KL6		
PNP/NPN	DC	NO/NC prog. Type push-pull operation			6502982001 KIN-N40PP/015-KLSD
NAMUR	DC				
Analogue	DC				
2-wire	DC	NO contact NC contact			
	AC	NO contact NC contact Changeover contact			

Technical data

Rated operating voltage	U_b	10–60 VDC	10–36 VDC	10–60 VDC	10–30 VDC
Rated operating current	I_b	≤ 200 mA	≤ 200 mA	≤ 400 mA	≤ 200 mA
Switching frequency (max)	F	200 Hz	50 Hz	100 Hz	–
Short circuit-protection		Cyclic	Cyclic	Cyclic	Cyclic
Function/operating voltage indicator		LED/–	LED/–	LED/–	LED/–
Sensing distance, adjustable					

Mechanical data

Ambient temperature (min/max)	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C	–25°C/+70°C
Protection class in accordance with IEC 529, EN 60529	IP67	IP67	IP65	IP67
Enclosure material	PBT, black	PA, red/black	PA, red	PA, black
Connection	3 x 0.5 mm ²	M12 x 1	DIN 43650	3 x 0.5 mm ²

Please refer to Accessories for cable couplers, mounting brackets and sensor tester.

