

**M 12 x 1****2 mm (0.08")**

●/-	●/-	-
NPN	PNP	AC

KIB-M12NS/ 002-KL2	KIB-M12PS/ 002-KL2	-
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693.2303.001	693.2903.001	
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263/4	263/1	
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●/-	●/-	
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-	-	-
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M 12 x 1**2 mm (0.08")**

●/-	●/-	-
NPN	PNP	AC

KIB-M12NS/ 002-KLS12	KIB-M12PS/ 002-KLS12	-
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693.2343.001	693.2943.001	
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263/4	263/1	
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●/-	●/-	
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-	-	-
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M 12 x 1**4 mm (0.16")**

-/●	-/●	-
NPN	PNP	AC

KIN-M12NS/ 004-KL2	KIN-M12PS/ 004-KL2	-
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693.2304.001	693.2904.001	
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263/4	263/1	
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●/-	●/-	
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-	-	-
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10-36 V	10-36 V	-
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-/200 mA	-/200 mA	-
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800 Hz	800 Hz	-
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●	●	-
---	---	---

●/-	●/-	-
-----	-----	---

-	-	-
---	---	---

10-36 V	10-36 V	-
---------	---------	---

-/200 mA	-/200 mA	-
----------	----------	---

800 Hz	800 Hz	-
--------	--------	---

●	●	-
---	---	---

●/-	●/-	-
-----	-----	---

-	-	-
---	---	---

10-36 V	10-36 V	-
---------	---------	---

-/200 mA	-/200 mA	-
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400 Hz	400 Hz	-
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●	●	-
---	---	---

●/-	●/-	-
-----	-----	---

-	-	-
---	---	---

-25 °C/+70 °C	-25 °C/+70 °C	-
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-13 °F/+158 °F	-13 °F/+158 °F	-
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IP 67/NEMA 4	IP 67/NEMA 4	-
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-	-	-
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PVC 3x0.14	PVC 3x0.14	-
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-	-	-
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-	-	-
---	---	---

-25 °C/+70 °C	-25 °C/+70 °C	-
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-13 °F/+158 °F	-13 °F/+158 °F	-
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IP 67/NEMA 4	IP 67/NEMA 4	-
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-	-	-
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-	-	-
---	---	---

284/285/286	284/285/286	-
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-	-	-
---	---	---

-25 °C/+70 °C	-25 °C/+70 °C	-
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-13 °F/+158 °F	-13 °F/+158 °F	-
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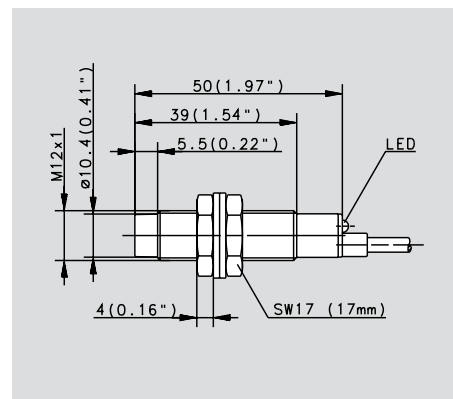
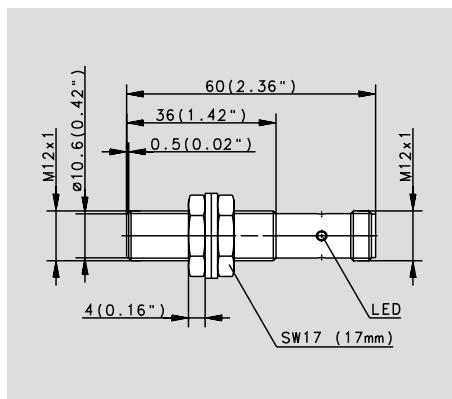
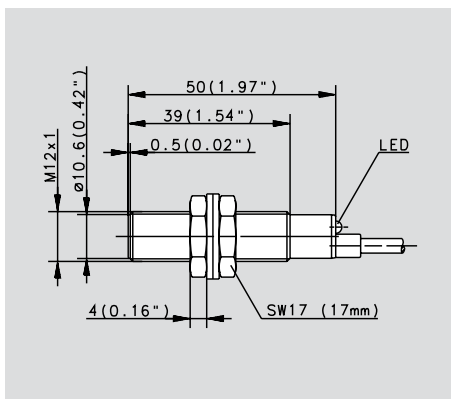
IP 67/NEMA 4	IP 67/NEMA 4	-
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-	-	-
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PVC 3x0.14	PVC 3x0.14	-
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-	-	-
---	---	---

-	-	-
---	---	---



Inductive sensors Globaline

M 12 x 1
M 18 x 1



Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
	Part number
Normally-open (NO)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed (NC)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed/open (NC/NO) selectable	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Complementary	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Electrical data	
Voltage range	
Output current	min./max.
Switching frequency	max.
Short-circuit protection	
LED: yellow = switched / green = power	
Sensitivity adjustment	
Mechanical data	
Temperature range	min./max.
Protection type after installation	
Housing material	
Termination	cable 2 m/6.5 ft mm ²
	plug (page/Pos.)
Accessories	(page/Pos.)

M 12 x 1

4 mm (0.16")

-/●	-/●	-
NPN	PNP	AC
KIN-M12NS/ 004-KLS12	KIN-M12PS/ 004-KLS12	-
693.2344.001	693.2944.001	
263/4	263/1	
●/-	●/-	

M 18 x 1

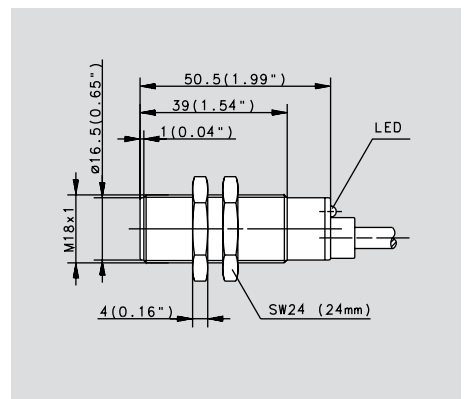
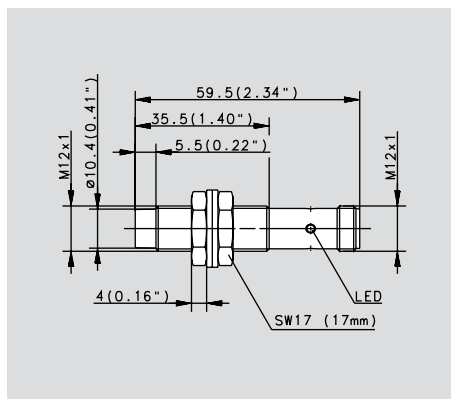
5 mm (0.20")

●/-	●/-	-
NPN	PNP	AC
KIB-M18NS/ 005-KL2	KIB-M18PS/ 005-KL2	-
693.2305.001	693.2905.001	
263/4	263/1	
●/-	●/-	

-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
10-36 V	10-36 V	-	10-36 V	10-36 V	-
-200 mA	-200 mA	-	-200 mA	-200 mA	-
400 Hz	400 Hz	-	500 Hz	500 Hz	-
●	●	-	●	●	-
●/-	●/-	-	●/-	●/-	-
-	-	-	-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-
-	-	-	-	-	-
-	-	-	PVC 3x0.5	PVC 3x0.5	-
284/285/286	284/285/286	-	-	-	-
-	-	-	266/6	266/6	-

Dimension diagrams

All dimensions in mm (inch)





M 18 x 1
5 mm (0.20")

●/-	●/-	-
NPN	PNP	AC
KIB-M18NS/ 005-KLS12	KIB-M18PS/ 005-KLS12	-
693.2305.004	693.2905.004	-
263/4	263/1	-
●/-	●/-	-
-	-	-

M 18 x 1
8 mm (0.32")

-/●	-/●	-
NPN	PNP	AC
KIN-M18NS/ 008-KL2	KIN-M18PS/ 008-KL2	-
693.2306.001	693.2906.001	-
263/4	263/1	-
●/-	●/-	-
-	-	-

M 18 x 1
8 mm (0.32")

-/●	-/●	-
NPN	PNP	AC
KIN-M18NS/ 008-KLS12	KIN-M18PS/ 008-KLS12	-
693.2306.004	693.2906.004	-
263/4	263/1	-
●/-	●/-	-
-	-	-

10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
500 Hz	500 Hz	-
●	●	-
●/-	●/-	-
-	-	-

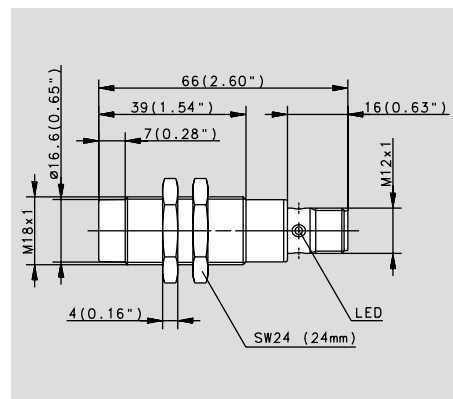
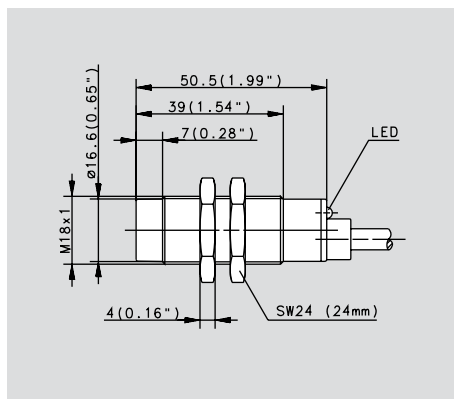
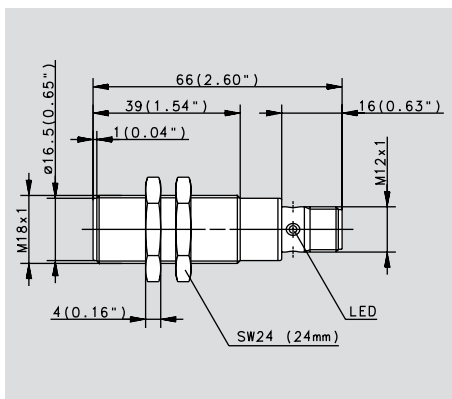
10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
200 Hz	200 Hz	-
●	●	-
●/-	●/-	-
-	-	-

10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
200 Hz	200 Hz	-
●	●	-
●/-	●/-	-
-	-	-

-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
-	-	-
-	-	-
284/285/286	284/285/286	-
266/6	266/6	-

-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
-	-	-
PVC 3x0.5	PVC 3x0.5	-
-	-	-
266/6	266/6	-

-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
-	-	-
-	-	-
284/285/286	284/285/286	-
-	-	-



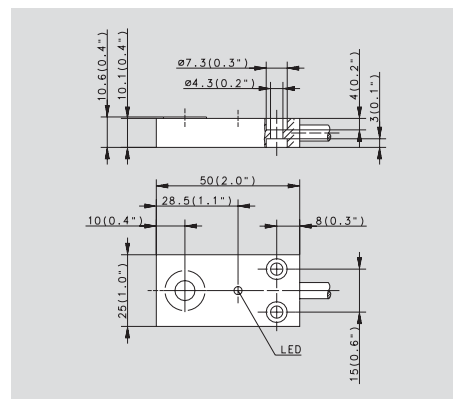
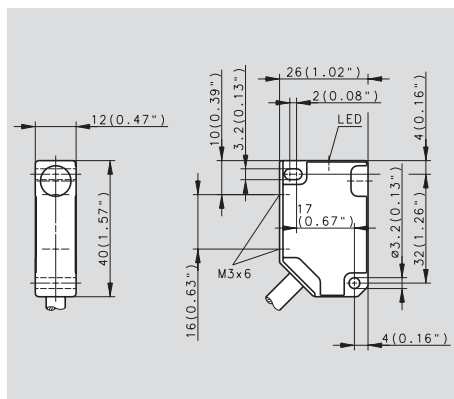
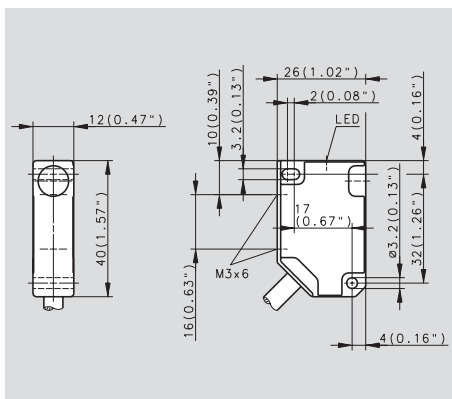


40 x 26 x 12
2 mm (0.08")

40 x 26 x 12
4 mm (0.16")

50 x 25 x 10
5 mm (0.20")

2 mm (0.08")			4 mm (0.16")			5 mm (0.20")		
NPN	PNP	AC	NPN	PNP	AC	NPN	PNP	AC
-	KIB-E40PS/ 002-KL2 650.2984.023 263/1	KIB-E40AS/ 002-L2 650.3584.004 265/4	-	KIN-E40PS/ 004-KL2 650.2984.024 263/1	KIN-E40AS/ 004-L2 650.3584.005 265/4	KIB-E50NS/ 005-KL2 650.2390.001 263/4	KIB-E50PS/ 005-KL2 650.2990.001 263/1	-
-	KIB-E40PÖ/ 002-KL2 650.2784.006 263/2	KIB-E40AÖ/ 002-L2 650.3484.003 265/5	-	KIN-E40PÖ/ 004-KL2 650.2784.007 263/2	KIN-E40AÖ/ 004-L2 650.3484.004 265/5	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	10-36 V	20-250 V AC	10-36 V	10-36 V	20-250 V AC	10-60 V	10-60 V	-
-	-/200 mA	-/300 mA	-/200 mA	-/200 mA	-/300 mA	-/200 mA	-/200 mA	-
-	800 Hz	10 Hz	400 Hz	400 Hz	10 Hz	500 Hz	500 Hz	-
-	●	-	●	●	-	●	●	-
-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	-
-	-	-	-	-	-	-	-	-
-	-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	-
-	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-
-	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	-
-	PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6	-
-	PVC 3x0.5	PVC 2x0.5	PVC 3x0.5	PVC 3x0.5	PVC 2x0.5	PVC 3x0.5	PVC 3x0.5	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-



Inductive sensors Multinorm

41.5 x 41.5 x 120



Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
Normally-open (NO)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed (NC)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed/open (NC/NO)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Complementary	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	

Electrical data	
Voltage range	min./max.
Output current	min./max.
Switching frequency	max.
Short-circuit protection	
LED: yellow = switched / green = power	
Sensitivity adjustment	

Mechanical data	
Temperature range	min./max.
Protection type	
Housing material	
Termination	cable 2 m/6.5 ft mm ² plug (page)
Accessories	(page/Pos.)

Dimension diagrams

All dimensions in mm (inch)

41.5 x 41.5 x 120

15 mm (0.59")

●/-	●/-	-
NPN	PNP	AC
-		
KIB-N44DP/ 015-KLS 650.2054.001 263/7 ●/-		

41.5 x 41.5 x 120

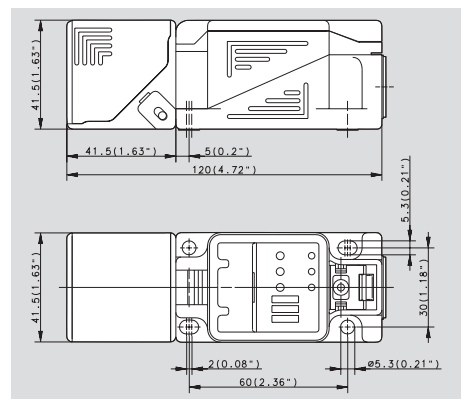
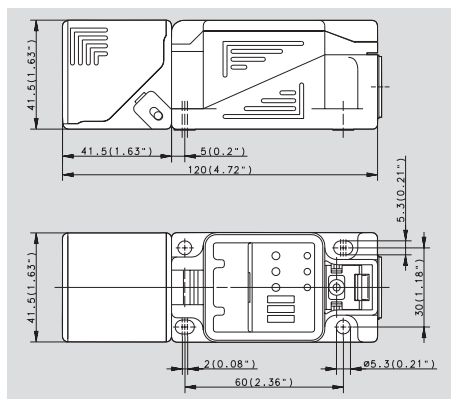
20 mm (0.78")

-/●	-/●	-
NPN	PNP	AC
-		
KIN-N44DP/ 020-KLS 650.2054.002 263/7 ●/-		

KIB-N44NP/ 015-KLS 650.2354.011 263/6 -/●	KIB-N44PP/ 015-KLS 650.2954.011 263/3 -/●	KIB-N44AP/ 015-LS 650.3554.009 265/6 ●/-	KIN-N44NP/ 020-KLS 650.2354.012 263/6 -/●	KIN-N44PP/ 020-KLS 650.2954.012 263/3 ●/-	KIN-N44AP/ 020-LS 650.3554.010 265/6 ●/-
--------------------------------------------------------------	--------------------------------------------------------------	-------------------------------------------------------------	--------------------------------------------------------------	--------------------------------------------------------------	-------------------------------------------------------------

10-60 V	10-60 V	20-250 V	10-60 V	10-60 V	20-250 V
-/400 mA	-/400 mA	4/500 mA	-/400 mA	-/400 mA	4/500 mA
100 Hz	100 Hz	15 Hz	50 Hz	50 Hz	15 Hz
●	●	-	●	●	-
●/●	●/●	●/●	●/●	●/●	●/●
-	-	-	-	-	-

-25 °C/+70 °C	-25 °C/+70 °C	-25 °C/+70 °C	-25 °C/+70 °C	-25 °C/+70 °C	-25 °C/+70 °C
-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F
IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12	IP 65/NEMA 12
PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6	PA 6.6
-	-	-	-	-	-
-	-	-	-	-	-

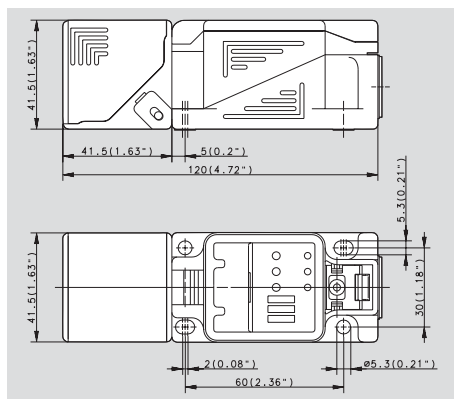
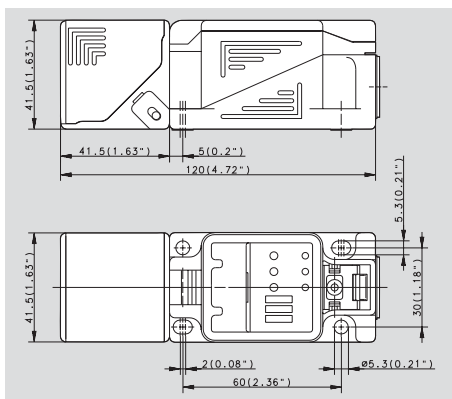




41.5 x 41.5 x 120 extended sensing distance
20 mm (0.78")

41.5 x 41.5 x 120 extended sensing distance
40 mm (1.57")

20 mm (0.78")			40 mm (1.57")		
●/-	●/-	-	-/●	-/●	-
NPN	PNP	AC	NPN	PNP	AC
		-			-
KIB-N44DP/ 020-KLSE 650.2054.004 263/7 ●/-		-	KIN-N44DP/ 040-KLSE 650.2054.005 263/7 ●/-		-
-	-	KIB-N44AP/ 020-LSE 650.3554.001 265/6 ●/-	-	-	KIN-N44AP/ 040-LSE 650.3554.002 265/6 -/●
-	-	-	-	-	-
-	10-60 V	20-250 V	-	10-60 V	20-250 V
-	-400 mA	-500 mA	-	-400 mA	-500 mA
-	50 Hz	15 Hz	-	50 Hz	15 Hz
-	●	-	-	●	-
-	●/●	●/●	-	●/-	●/●
-	-	-	-	-	-
-	-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C
-	-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F
-	IP 65/NEMA 12	IP 65/NEMA 12	-	IP 65/NEMA 12	IP 65/NEMA 12
-	PA 6.6	PA 6.6	-	PA 6.6	PA 6.6
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-





8 x 8 x 47

1.5 mm (0.06")

	●/-	-
NPN	PNP	AC
-	KIB-Q08PS/ 1.5-KLSM8 650.2980.002 263/1	-
-	●/-	-
-	KIB-Q08PÖ/ 1.5-KLSM8 650.2780.002 263/2	-
-	-/●	-
-	-	-
-	-	-
-	-	-
-	-	-
-	10-36 V	-
-	-200 mA	-
-	1000 Hz	-
-	●	-
-	●/-	-
-	-	-
-	-25 °C/+70 °C	-
-	-13 °F/+158 °F	-
-	IP 67/NEMA 4	-
-	CuZn39Pb3	-
-	-	-
-	282/283	-
-	-	-

12 x 12 x 55 extended sensing distance

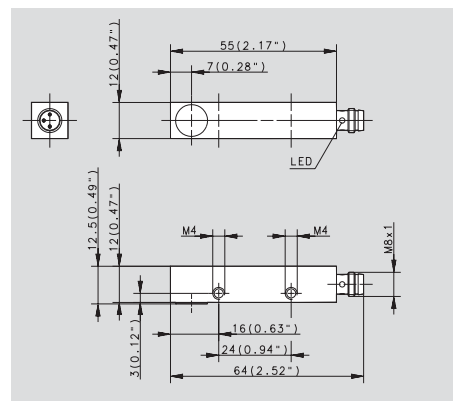
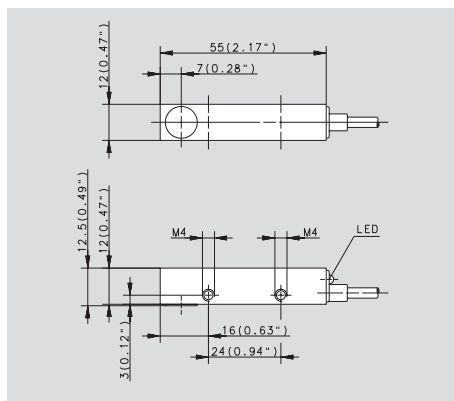
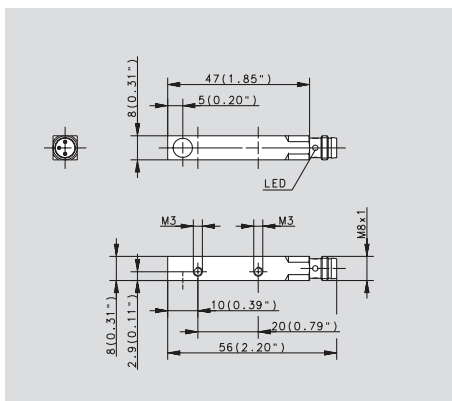
4 mm (0.16")

	●/-	-
NPN	PNP	AC
-	KIB-Q12PS/ 004-KL2E 650.2999.028 263/1	-
-	-/●	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
-	10-60 V	-
-	-200 mA	-
-	800 Hz	-
-	●	-
-	●/-	-
-	-	-
-	-25 °C/+70 °C	-
-	-13 °F/+158 °F	-
-	IP 67/NEMA 4	-
-	CuZn39Pb3	-
-	PVC 3x0.14	-
-	-	-
-	-	-
-	-	-



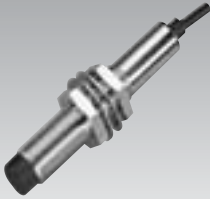

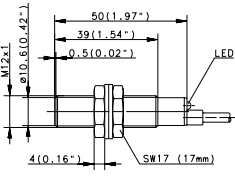
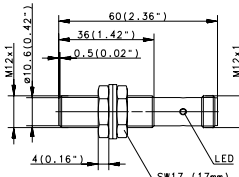
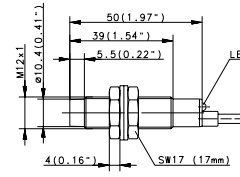
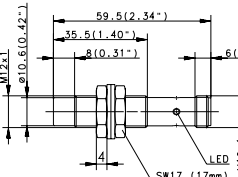
12 x 12 x 55 extended sensing distance


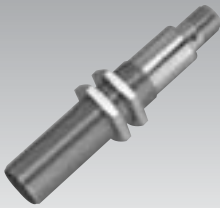


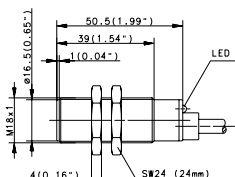
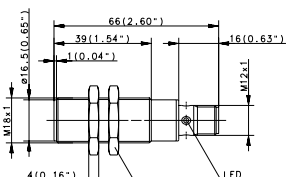
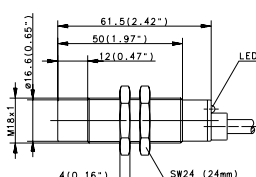
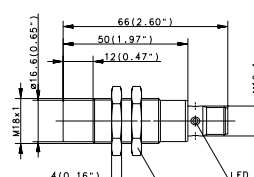
4 mm (0.16")

	●/-	●/-	-
NPN	PNP	AC	
-	KIB-Q12NS/ 004-KLSM8E 650.2399.021 263/4	KIB-Q12PS/ 004-KLSM8E 650.2999.030 263/1	-
-	-/●	●/-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	10-36 V	10-36 V	-
-	-200 mA	-200 mA	-
-	800 Hz	800 Hz	-
-	●	●	-
-	●/-	●/-	-
-	-	-	-
-	-25 °C/+70 °C	-25 °C/+70 °C	-
-	-13 °F/+158 °F	-13 °F/+158 °F	-
-	IP 67/NEMA 4	IP 67/NEMA 4	-
-	CuZn39Pb3	CuZn39Pb3	-
-	-	-	-
-	282/283	282/283	-
-	-	-	-



Inductive sensors with increased sensing distances

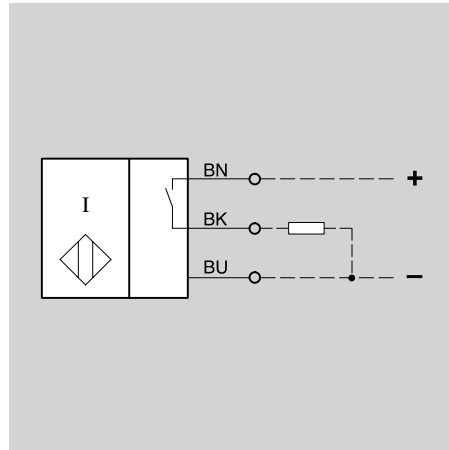
Type M12	4 mm sensing distance		8 mm sensing distance	
				
	flush metal design		non-flush metal design	
	2 m cable	M12 plug	2 m cable	M12 plug
PNP normally-open contact*)	KIB-M12PS/004-KL2E 650.2903.025	KIB-M12PS/004-KLS12E 650.2943.015	KIN-M12PS/008-KL2E 650.2904.021	KIN-M12PS/008-KLS12E 650.2944.013
Dimensions				

Type M18	8 mm sensing distance		16 mm sensing distance	
				
	flush metal design		non-flush metal design	
	2 m cable	M12 plug	2 m cable	M12 plug
PNP normally-open contact*)	KIB-M18PS/008-KL2E 650.2905.022	KIB-M18PS/008-KLS12E 650.2940.005	KIN-M18PS/016-KL2E 650.2906.018	KIN-M18PS/016-KLS12E 650.2941.004
Dimensions				

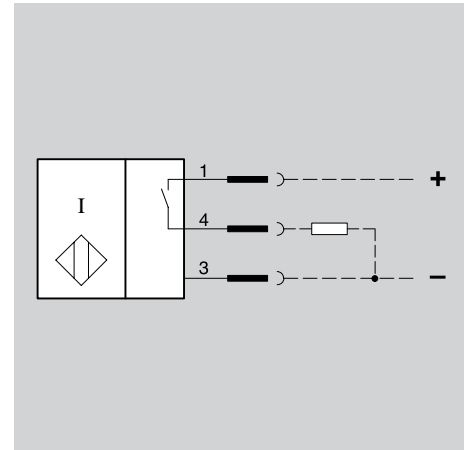
*) Order only with part number, NPN- and normally-closed version on request

Wiring diagrams

Type M12/M18, cable version



Type M12/M18, plug version



Accessories

Cable couplings see page 284 ff.





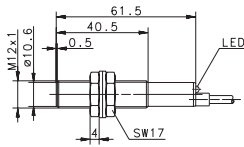
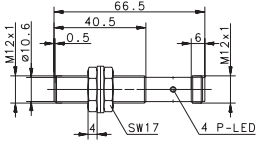
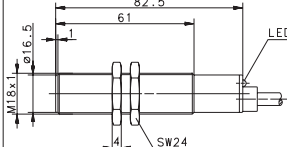
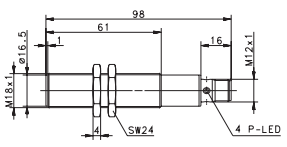
General data



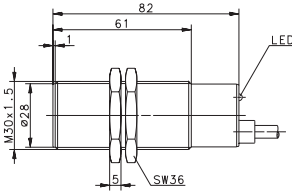
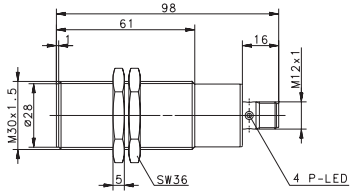
	M12		M18	
	flush	non-flush	flush	non-flush
Operating voltage	10–36 V			
Rated operating voltage	≤ 200 mA			
Switching hysteresis	10% from rated switching distance			
Reproducibility	$\leq 5\%$			
Switching frequency	800 Hz	400 Hz	500 Hz	200 Hz
Output	short circuit- and overload proof			
Polarity reversal protection	yes			
Rated switching distance	4 mm	8 mm	8 mm	16 mm
Functions-/operating voltage display	●/–	●/–	●/–	●/–
Ambient temperature	– 25 °C to + 70 °C			
Protection class	IP 67 according to IEC 529, EN 60 529			
Enclosure	nickel-plated brass (CuZn39Pb3)			
Cable PVC	3 x 0.14		3 x 0.5	

Inductive sensors

Temperature range

-40 °C to +100 °C

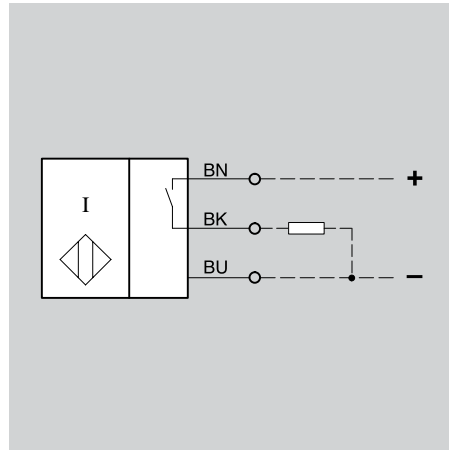
Type M12 M18	2 mm sensing distance M12		5 mm sensing distance M18	
				
PNP normally-open contact*)	flush metal design		flush metal design	
	2 m cable	M12 plug	2 m cable	M12 plug
Model description Part number	KIB-M12PS/002-KL2T 650.2903.026	KIB-M12PS/002-KLS12T 650.2943.016	KIB-M18PS/005-KL2PUT 650.2905.023	KIB-M18PS/005-KLS12T 650.2940.006
Dimensions				

Type M30	10 mm sensing distance	
		
PNP normally-open contact*)	flush metal design	
	2 m cable	M12 plug
Model description Part number	KIB-M30PS/010-KL2PUT 650.2907.013	KIB-M30PS/010-KLS12T 650.2939.006
Dimensions		

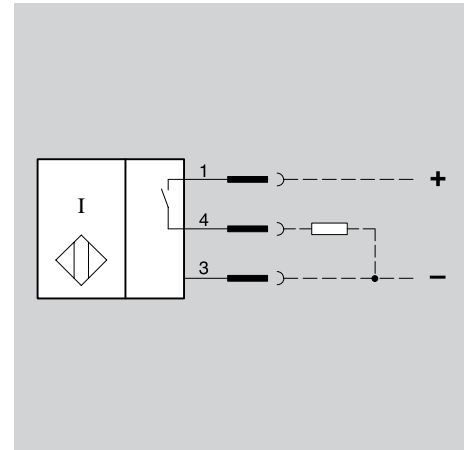
*) Order only with part number, NPN- and normally-closed version on request

Wiring diagrams

Type M12/M18/M30, cable version



Type M12/M18/M30, plug version



Accessories

Cable couplings see page 284 ff.

General data

	M12 flush	M18 flush	M30 flush
Operating voltage	U_B	10–36 V	
Rated operating voltage	I_B	≤ 200 mA	
Switching hysteresis	H	10% from rated switching distance	
Reproducibility	R	$\leq 5\%$	
Switching frequency	F	800 Hz	300 Hz
Output		short circuit- and overload proof	
Polarity reversal protection		yes	
Rated switching distance	S_n	2 mm	10 mm
Functions-operating voltage display		●/–	●/–
Ambient temperature		– 40 °C to + 100 °C	
Protection class		IP 67 according to IEC 529, EN 60 529	
Enclosure		nickel-plated brass (CuZn39Pb3)	
Cable PVC	mm ²	3 x 0.14	3 x 0.5

Inductive sensors

M 12 x 1



Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
Normally-open (NO)	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed (NC)	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed/open (NC/NO) selectable	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Complementary	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Electrical data	
Voltage range	
Output current	min./max.
Switching frequency	max.
Short-circuit protection	
LED: yellow = switched / green = power	
Sensitivity adjustment	
Mechanical data	
Temperature range	min./max.
Protection type	
Housing material	
Termination	cable 2 m/6.5 ft mm ²
	plug (page)
Accessories	(page/Pos.)

M 12 x 1

2 mm (0.08")

●/-	●/-	●/-
NPN	PNP	AC
KIB-M12NS/ 002-KL2	KIB-M12PS/ 002-KL2	KIB-M12AS/ 002-L2
650.2303.001	650.2903.003	650.3503.001
263/4	263/1	265/4
-/●	●/-	●/-
-	KIB-M12PÖ/ 002-KL2	KIB-M12AÖ/ 002-L2
	650.2703.001	650.3403.001
	263/2	265/5
	-/●	-/●
-	-	-

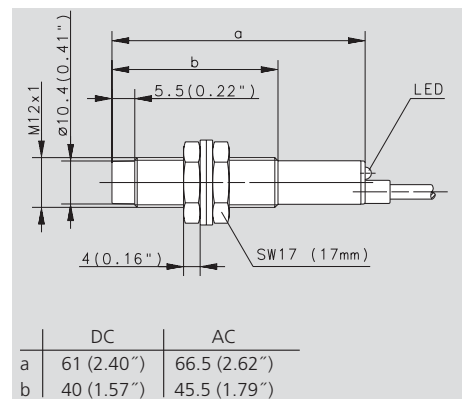
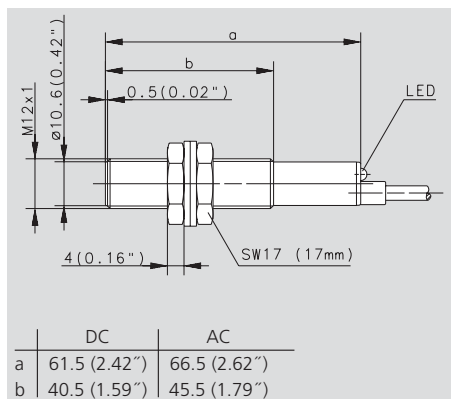
M 12 x 1

4 mm (0.16")

-/●	-/●	-/●
NPN	PNP	AC
KIN-M12NS/ 004-KL2	KIN-M12PS/ 004-KL2	KIN-M12AS/ 004-L2
650.2304.001	650.2904.002	650.3504.001
263/4	263/1	265/4
●/-	●/-	●/-
KIN-M12NÖ/ 004-KL2	KIN-M12PÖ/ 004-KL2	KIN-M12AÖ/ 004-L2
650.2104.001	650.2704.001	650.3404.001
263/5	263/2	265/5
-/●	●/-	-/●
-	-	-

Dimension diagrams

All dimensions in mm (inch)



**M 12 x 1****2 mm (0.08")**

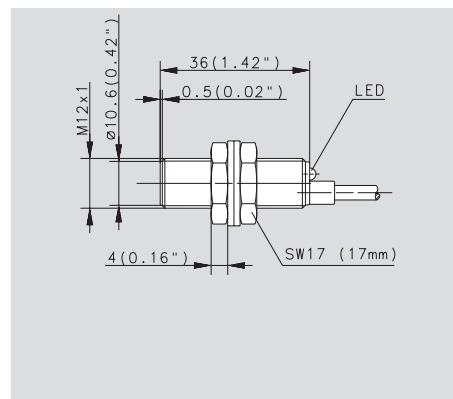
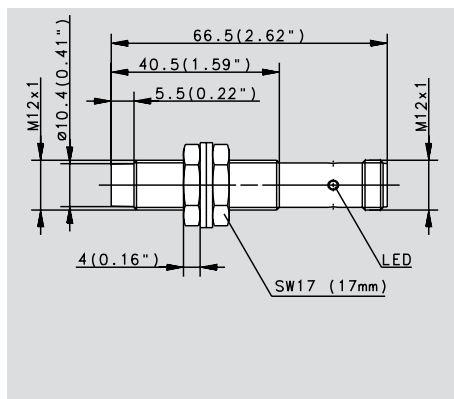
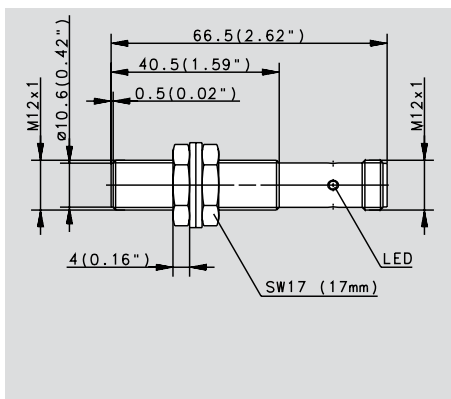
●/-	●/-	-
NPN	PNP	AC
KIB-M12NS/ 002-KLS12	KIB-M12PS/ 002-KLS12	-
650.2343.003	650.2943.012	
263/4	263/1	
-/●	●/-	
-	KIB-M12PÖ/ 002-KLS12	-
	650.2743.003	
	263/2	
	-/●	
-	-	-
-	-	-
-	-	-
10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
800 Hz	800 Hz	-
●	●	-
●/-	●/-	-
-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
CuZn39Pb3	CuZn39Pb3	-
-	-	-
284/285/286	284/285/286	-
-	-	-

M 12 x 1**4 mm (0.16")**

-	-/●	-
NPN	PNP	AC
-	KIN-M12PS/ 004-KLS12	-
	650.2944.012	
	263/1	
	●/-	
-	KIN-M12PÖ/ 004-KLS12	-
	650.2744.003	
	263/2	
	-/●	
-	-	-
-	-	-
-	-	-
10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
400 Hz	400 Hz	-
●	●	-
●/-	●/-	-
-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
CuZn39Pb3	CuZn39Pb3	-
-	-	-
284/285/286	284/285/286	-
-	-	-

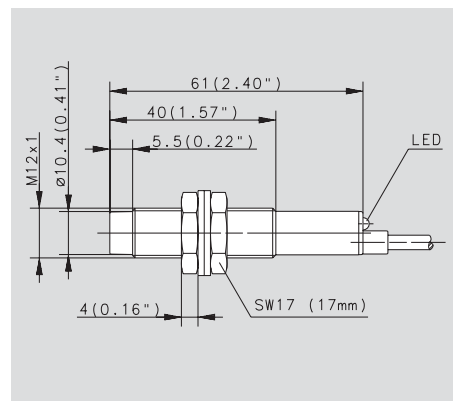
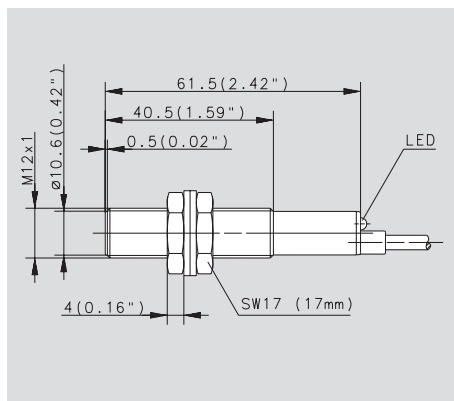
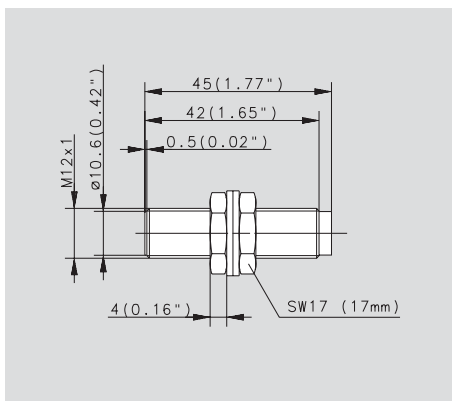
M 12 x 1**2 mm (0.08")**

●/-	●/-	-
NPN	PNP	AC
KIB-M12NS/ 002-KL2V	KIB-M12PS/ 002-KL2V	-
650.2103.003	650.2903.016	
263/5	263/1	
-/●	-/●	
KIB-M12NÖ/ 002-KL2V	KIB-M12PÖ/ 002-KL2V	-
650.2703.005	650.2703.005	
263/5	263/2	
-/●	-/●	
-	-	-
-	-	-
-	-	-
10-36 V	10-36 V	-
-/200 mA	-/200 mA	-
800 Hz	800 Hz	-
●	●	-
●/-	●/-	-
-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-
CuZn39Pb3	CuZn39Pb3	-
-	PVC 3x0.14	-
-	PVC 3x0.14	-
-	-	-





M 12 x 1 2 mm (0.08")			M 12 x 1 4 mm (0.16")			M 12 x 1 6 mm (0.24")		
NPN	PNP	AC	NPN	PNP	AC	NPN	PNP	AC
-	●/-	-	-	●/-	-	-/●	-/●	-
-	KIB-M12PS/ 002-KS12V 650.2943.006 263/1	-	-	KIB-M12PS/ 004-KL2E 650.2903.014 263/1	-	KIN-M12NS/ 006-KL2E 650.2304.012 263/4	KIN-M12PS/ 006-KL2E 650.2904.009 263/1	-
-	●/-	-	-	●/-	-	-/●	●/-	-
-	KIB-M12PÖ/ 002-KS12V 650.2743.005 263/2	-	-	-	-	-	KIN-M12PÖ/ 006-KL2E 650.2704.005 263/2	-
-	-/●	-	-	-	-	-	-/●	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	10-36 V	-	-	10-60 V	-	10-60 V	10-60 V	-
-	-200 mA	-	-	-200 mA	-	-200 mA	-200 mA	-
-	800 Hz	-	-	800 Hz	-	400 Hz	400 Hz	-
-	●	-	-	●	-	●	●	-
-	●/-	-	-	●/-	-	●/-	●/-	-
-	-	-	-	-	-	-	-	-
-	-25 °C/+70 °C	-	-	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-
-	-13 °F/+158 °F	-	-	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-
-	IP 67/NEMA 4	-	-	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-
-	CuZn39Pb3	-	-	CuZn39Pb3	-	CuZn39Pb3	CuZn39Pb3	-
-	-	-	-	PVC 3x0.14	-	PVC 3x0.14	PVC 3x0.14	-
-	284/285/286	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-



Inductive sensors

M 12 x 1



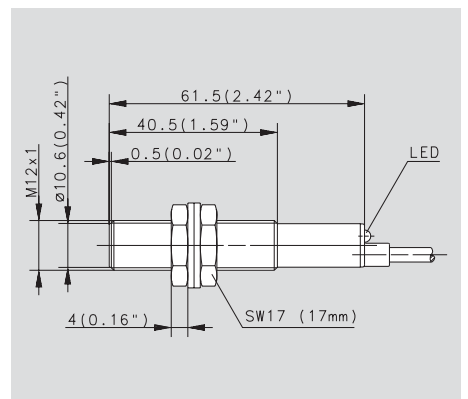
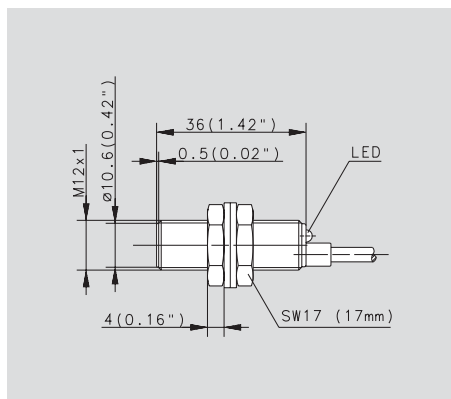
Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
	Part number
Normally-open (NO)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed (NC)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed/open (NC/NO) selectable	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Complementary	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Electrical data	
Voltage range	
Output current	min./max.
Switching frequency	max.
Short-circuit protection	
LED: yellow = switched / green = power	
Sensitivity adjustment	
Mechanical data	
Temperature range	min./max.
Protection type	
Housing material	
Termination	cable 2 m/6.5 ft mm ²
	plug (page)
Accessories	(page/Pos.)

M 12 x 1 extended sensing distance M 12 x 1 higher temperature range

4 mm (0.16")			2 mm (0.08")		
NPN	PNP	AC	NPN	PNP	AC
-	●/-	-	-	●/-	-
-	KIB-M12PS/004-KL2VE	-	-	KIB-M12PS/002-KL2T	-
-	650.2903.023	-	-	650.2903.013	-
-	263/1	-	-	263/1	-
-	●/-	-	-	-/●	-
-	-	-	-	KIB-M12PÖ/002-KL2T	-
-	-	-	-	650.2703.004	-
-	-	-	-	263/2	-
-	-	-	-	-/●	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	10-36 V	-	-	10-36 V	-
-	-/200 mA	-	-	-/200 mA	-
-	800 Hz	-	-	800 Hz	-
-	●	-	-	●	-
-	●/-	-	-	●/-	-
-	-	-	-	-	-
-	-25 °C/+70 °C	-	-	0 °C/+100 °C	-
-	-13 °F/+158 °F	-	-	-32 °F/+212 °F	-
-	IP 67/NEMA 4	-	-	IP 67/NEMA 4	-
-	CuZn39Pb3	-	-	CuZn39Pb3	-
-	PVC 3x0.14	-	-	PVC 3x0.14	-
-	-	-	-	-	-
-	-	-	-	-	-

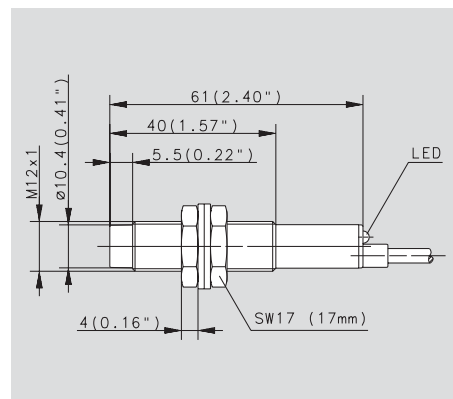
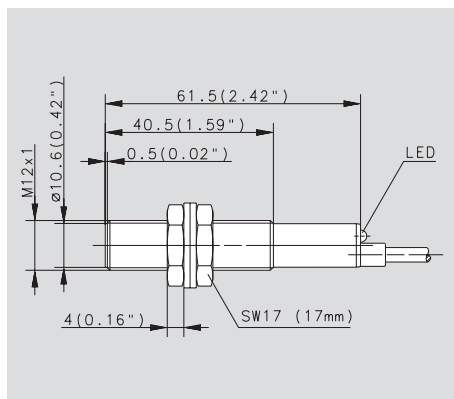
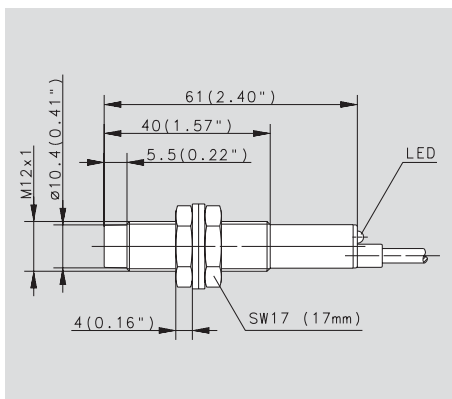
Dimension diagrams

All dimensions in mm (inch)





M 12 x 1 4 mm (0.16")			M 12 x 1 2 mm (0.08")			M 12 x 1 4 mm (0.16")		
higher temperature range	higher switching frequency	higher switching frequency						
-	-/●	-	●/-	●/-	-	-/●	-/●	-
NPN	PNP	AC	NPN	PNP	AC	NPN	PNP	AC
-	KIN-M12PS/ 004-KL2T 650.2904.011 263/1 -/●	-	KIB-M12NS/ 002-KL2F 650.2303.005 263/4 -/●	KIB-M12PS/ 002-KL2F 650.2903.012 263/1 -/●	-	KIN-M12NS/ 004-KL2F 650.2304.006 263/4 -/●	KIN-M12PS/ 004-KL2F 650.2904.010 263/1 ●/-	-
-	KIN-M12PÖ/ 004-KL5T 650.2704.004 263/2 -/●	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	10-36 V	-	10-60 V	10-60 V	-	10-60 V	10-60 V	-
-	-/200 mA	-	-/200 mA	-/200 mA	-	-/200 mA	-/200 mA	-
-	400 Hz	-	4000 Hz	4000 Hz	-	3000 Hz	3000 Hz	-
-	●	-	●	●	-	●	●	-
-	●/-	-	●/-	●/-	-	●/-	●/-	-
-	-	-	-	-	-	-	-	-
-	0 °C/+100 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-
-	-32 °F/+212 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-
-	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-
-	CuZn39Pb3	-	CuZn39Pb3	CuZn39Pb3	-	CuZn39Pb3	CuZn39Pb3	-
-	PVC 3x0.14	-	PVC 3x0.14	PVC 3x0.14	-	PVC 3x0.14	PVC 3x0.14	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-



Inductive sensors

M 18 x 1



Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
	Part number
Normally-open (NO)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed (NC)	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Normally-closed/open (NC/NO) selectable	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
	Part number
Complementary	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Electrical data	
Voltage range	10–60 V
Output current	min./max. –/200 mA
Switching frequency	max. 500 Hz
Short-circuit protection	●
LED: yellow = switched / green = power	●/–
Sensitivity adjustment	–
Mechanical data	
Temperature range	min./max. –25 °C/+70 °C
Protection type	IP 67/NEMA 4
Housing material	CuZn39Pb3
Termination	cable 2 m/6.5 ft mm ²
	plug (page)
Accessories	(page/Pos.)

M 18 x 1 5 mm (0.20")

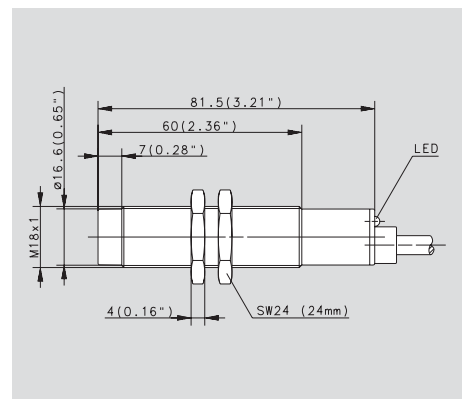
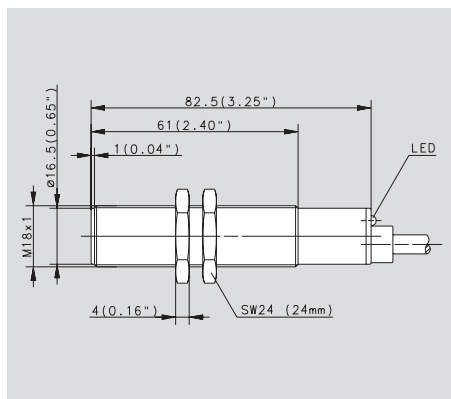
●/–	●/–	●/–
NPN	PNP	AC
KIB-M18NS/ 005-KL2	KIB-M18PS/ 005-KL2	KIB-M18AS/ 005-L2
650.2305.134	650.2905.850	650.3505.004
263/4	263/1	265/4
–/●	●/–	●/–
–	KIB-M18PÖ/ 005-KL3	KIB-M18AÖ/ 005-L2
	650.2705.172	650.3405.001
	263/2	265/5
	–/●	–/●
–	–	–
–	KIB-M18PU/ 005-KL2	–
	650.2805.001	
	264/4	
	–/●	

M 18 x 1 8 mm (0.32")

–/●	–/●	–/●
NPN	PNP	AC
KIN-M18NS/ 008-KL2	KIN-M18PS/ 008-KL2	KIN-M18AS/ 008-L2
650.2306.194	650.2906.200	650.3506.002
263/4	263/1	265/4
–/●	●/–	●/–
–	KIN-M18NÖ/ 008-KL2	KIN-M18PÖ/ 008-KL2
	650.2106.191	650.2706.001
	263/5	263/2
	–/●	–/●
–	–	–
–	KIN-M18PU/ 008-KL2	–
	650.2806.001	
	264/4	
	–/●	

Dimension diagrams

All dimensions in mm (inch)




M 18 x 1
5 mm (0.20")

	●/-	-
NPN	PNP	AC
-	KIB-M18PS/ 005-KL2V 650.2905.008 263/1	-
-	●/-	-
-	KIB-M18PÖ/ 005-KL2V 650.2705.006 263/2	-
-	-/●	-
-	-	-

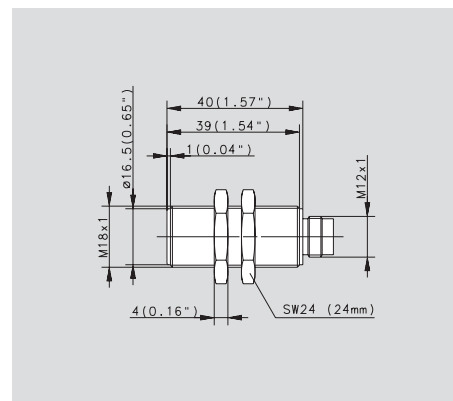
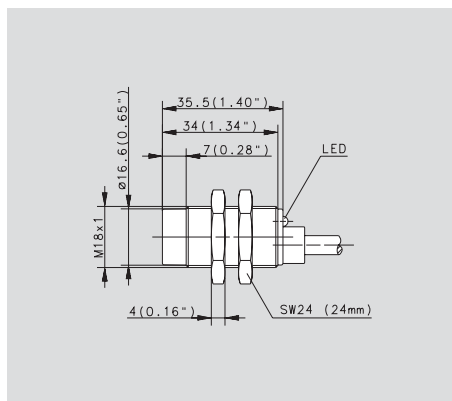
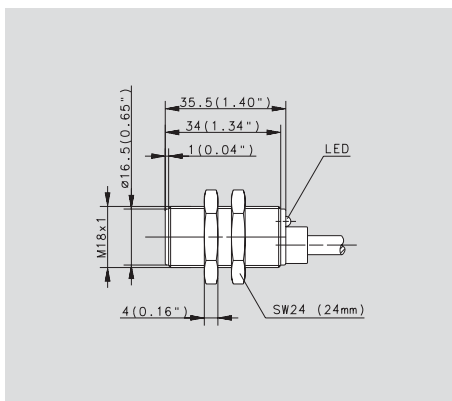
M 18 x 1
8 mm (0.32")

	-/●	-/●	-
NPN	PNP	AC	
-	KIN-M18NS/ 008-KL2V 650.2306.004 263/4	-	-
-	●/-	-	-
-	KIN-M18PÖ/ 008-KL2V 650.2706.002 263/2	-	-
-	-/●	-	-
-	-	-	-

M 18 x 1
5 mm (0.20")

	●/-	-
NPN	PNP	AC
-	KIB-M18PS/ 005-KS12V 650.2905.012 263/1	-
-	●/-	-
-	KIB-M18PÖ/ 005-KS12V 650.2705.007 263/2	-
-	-/●	-
-	-	-

-	10-60 V	-	10-60 V	10-60 V	-	-	10-60 V	-
-	-200 mA	-	-200 mA	-200 mA	-	-	-200 mA	-
-	500 Hz	-	200 Hz	200 Hz	-	-	500 Hz	-
-	●	-	●	●	-	-	●	-
-	●/-	-	●/-	●/-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-	-	-25 °C/+70 °C	-
-	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-	-	-13 °F/+158 °F	-
-	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-	-	IP 67/NEMA 4	-
-	CuZn39Pb3	-	CuZn39Pb3	CuZn39Pb3	-	-	CuZn39Pb3	-
-	PVC 3x0.5	-	PVC 3x0.5	PVC 3x0.5	-	-	-	-
-	-	-	-	-	-	-	284/285/286	-
-	266/6	-	266/6	266/6	-	-	266/6	-



**M 30 x 1.5****10 mm (0.39")**

●/-	●/-	●/-
NPN	PNP	AC

KIB-M30NS/ 010-KL2 650.2307.135 263/4	KIB-M30PS/ 010-KL2 650.2907.068 263/1	KIB-M30AS/ 010-L2 650.3507.378 265/4
-------------------------------------------------------	-------------------------------------------------------	------------------------------------------------------

-/●	●/-	●/-
-----	-----	-----

-	-	KIB-M30AÖ/ 010-L2 650.3407.240 265/5
-	-	-/●

M 30 x 1.5**15 mm (0.59")**

-/●	-/●	-/●
NPN	PNP	AC

KIN-M30NS/ 015-KL2 650.2308.001 263/4	KIN-M30PS/ 015-KL2 650.2908.002 263/1	KIN-M30AS/ 015-L2.5 650.3508.246 265/4
-------------------------------------------------------	-------------------------------------------------------	--------------------------------------------------------

-/●	●/-	-/●
-----	-----	-----

-	-	-
---	---	---

M 30 x 1.5**10 mm (0.39")**

-	●/-	-
NPN	PNP	AC

-	KIB-M30PS/ 010-KLS12 650.2939.004 263/1	-
---	---------------------------------------------------------	---

-	●/-	-
---	-----	---

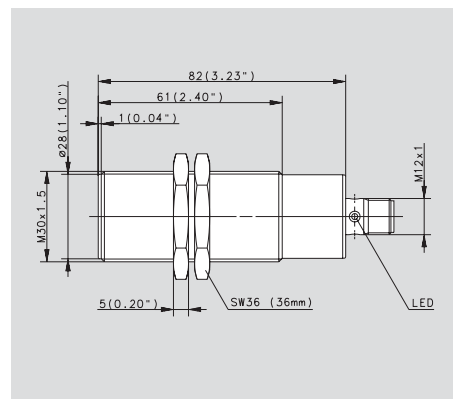
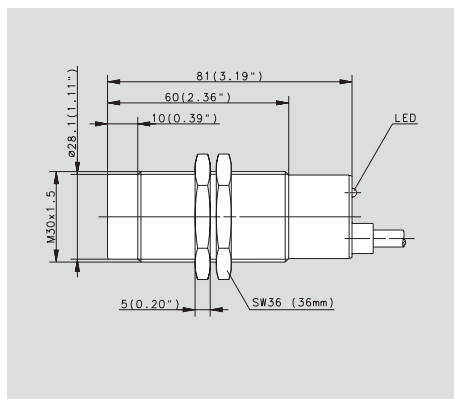
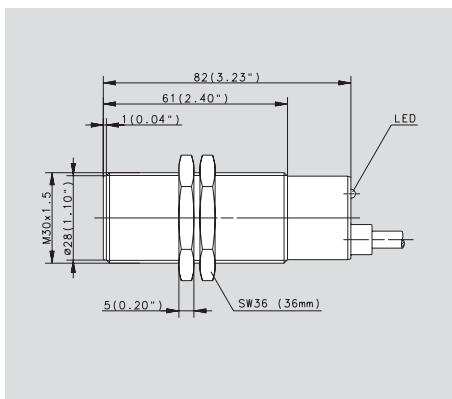
-	-	-
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KIB-M30NU/ 010-KL2 650.2207.001 264/5	-	-
-/●	-	-

KIN-M30PU/ 015-KL2 650.2808.001 264/4	-	-
-/●	-	-

10-60 V	10-60 V	20-250 V	10-60 V	10-60 V	20-250 V	-	10-60 V	-
-/200 mA	-/200 mA	4/400 mA	-/200 mA	-/200 mA	4/400 mA	-	-/200 mA	-
300 Hz	300 Hz	10 Hz	100 Hz	100 Hz	10 Hz	-	300 Hz	-
●	●	-	●	●	-	-	●	-
●/-	●/-	●/-	●/-	●/-	●/-	-	●/-	-
-	-	-	-	-	-	-	-	-

-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	-
-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	IP 67/NEMA 4	-	IP 67/NEMA 4	-
CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	CuZn39Pb3	-	CuZn39Pb3	-
PVC 3x0.5/4x0.5	PVC 3x0.5/4x0.5	PVC 2x0.5	PVC 3x0.5/4x0.5	PVC 3x0.5/4x0.5	PVC 2x0.5	-	-	-
-	-	-	-	-	-	-	284/285/286	-
266/8	266/8	266/8	266/8	266/8	266/8	-	266/8	-



**M 30 x 1.5****15 mm (0.59")**

	-/●	-/●
NPN	PNP	AC
-	KIN-T30PS/ 015-KL2 650.2923.981 263/1	KIN-T30AS/ 015-L2.5 ¹⁾ 650.3523.956 265/4
-	●/-	●/-

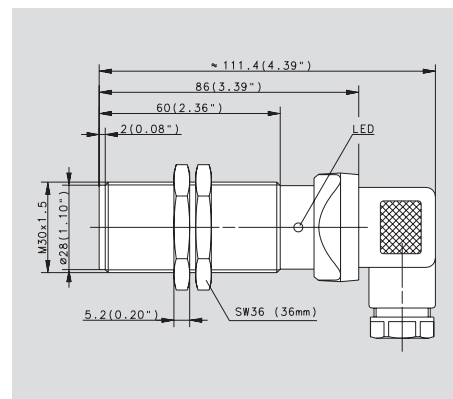
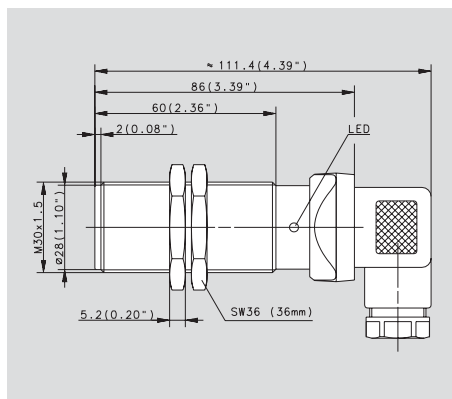
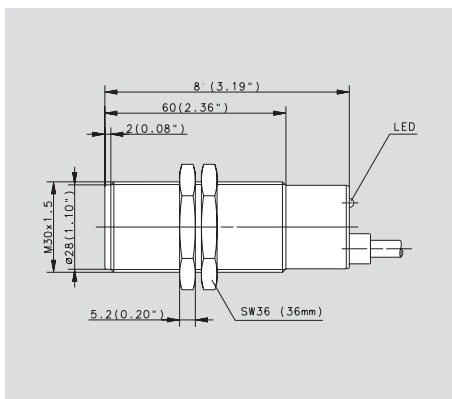
M 30 x 1.5**10 mm (0.39")**

	●/-	-
NPN	PNP	AC
-	-	-
-	-	-
-	-	-
-	KIB-T30PP/ 010-KLSD 650.2822.862 ¹⁾	-
-	●/-	-

M 30 x 1.5**15 mm (0.59")**

	-/●	-/●
NPN	PNP	AC
-	KIN-M30PS/ 015-KLSD 650.2935.001 ¹⁾	-
-	●/-	-
-	-	-
-	-	-
-	KIN-T30PP/ 015-KLSD 650.2836.860 ¹⁾	KIN-T30AP/ 015-LSD 650.3536.868 ²⁾
-	●/-	●/-

-	10-60 V	20-250 V	-	10-60 V	-	-	10-60 V	20-250 V
-	-200 mA	4/400 mA	-	-200 mA	-	-	-200 mA	4/400 mA
-	100 Hz	10 Hz	-	300 Hz	-	-	100 Hz	10 Hz
-	●	-	-	●	-	-	●	-
-	●/-	●/-	-	●/-	-	-	●/-	●/-
-	-	-	-	-	-	-	-	-
-	-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-	-	-25 °C/+70 °C	-25 °C/+70 °C
-	-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-	-	-13 °F/+158 °F	-13 °F/+158 °F
-	IP 67/NEMA 4	IP 67/NEMA 4	-	IP 65/NEMA 12	-	-	IP 65/NEMA 12	IP 65/NEMA 12
-	PA 6	PA 6	-	PA 6	-	-	CuZn39Pb3/PA 6	PA 6
-	PVC 3x0.5	PVC 2x0.5	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	266/8	266/8	-	266/8	-	-	266/8	266/8



Inductive sensors

- M 4 x 0.5
- M 5 x 0.5
- M 8 x 1

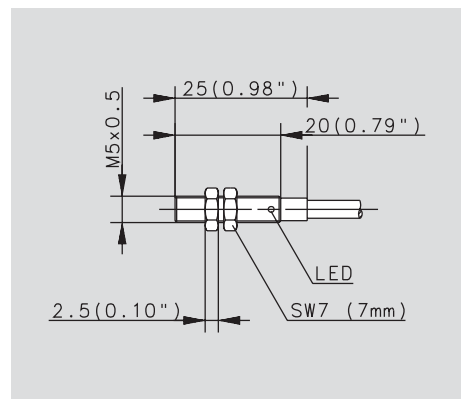
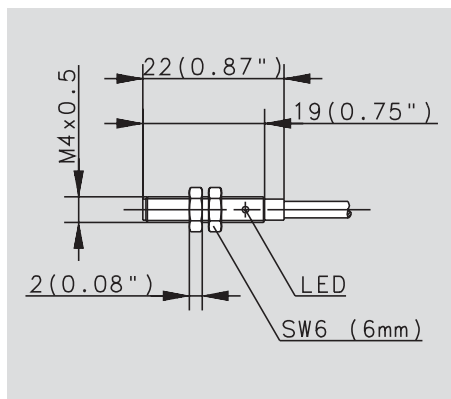


Rated operating distance	
Mounting	flush /non-flush
Switching functions	
	Model description
Normally-open (NO)	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed (NC)	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Normally-closed/open (NC/NO) selectable	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
	Model description
Complementary	Part number
	Wiring diagram (page/pos.)
Stock status: Ex stock/Built to order	
Electrical data	
Voltage range	
Output current	min./max.
Switching frequency	max.
Short-circuit protection	
LED: yellow = switched / green = power	
Sensitivity adjustment	
Mechanical data	
Temperature range	min./max.
Protection type	
Housing material	
Termination	cable 2 m/6.5 ft mm ²
	plug (page)
Accessories	(page/Pos.)

M 4			M 5		
0.6 mm (0.02")			1 mm (0.04")		
NPN	PNP	AC	NPN	PNP	AC
KIB-M04NS/ 0.6-KL2PU	KIB-M04PS/ 0.6-KL2PU	-	KIB-M05NS/ 001-KL2PU	KIB-M05PS/ 001-KL2PU	-
650.2399.018	650.2999.020		650.2399.003	650.2999.003	
263/4	263/1		263/4	263/1	
-/●	●/-		-/●	●/-	
-	KIB-M04PÖ/ 0.6-KL2PU	-	KIB-M05NÖ/ 001-KL2PU	KIB-M05PÖ/ 001-KL2PU	-
	650.2799.008		650.2199.001	650.2799.001	
	263/2		263/5	263/2	
	-/●		-/●	●/-	
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
10-30 V	10-30 V	-	10-30 V	10-30 V	-
-/100 mA	-/100 mA	-	-/200 mA	-/200 mA	-
3000 Hz	3000 Hz	-	3000 Hz	3000 Hz	-
●	●	-	●	●	-
●/-	●/-	-	●/-	●/-	-
-	-	-	-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-
CuZn39Pb3	CuZn39Pb3	-	CuZn39Pb3	CuZn39Pb3	-
PUR 3x0.055	PUR 3x0.055	-	PUR 3x0.14	PUR 3x0.14	-
-	-	-	-	-	-
266/3	266/3	-	266/4	266/4	-

Dimension diagrams

All dimensions in mm (inch)



**M 5****1 mm (0.04")**

–	●/–	–
NPN	PNP	AC

–	KIB-M05PS/ 001-KLSM8	–
–	650.2999.018	–
–	263/1	–

–	●/–	–
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–	–	–
---	---	---

–	–	–
---	---	---

–	10–30 V	–
–	–200 mA	–
–	3000 Hz	–

–	●	–
–	●/–	–

–	–	–
---	---	---

–	–25 °C/+70 °C	–
–	–13 °F/+158 °F	–

–	IP 67/NEMA 4	–
---	--------------	---

–	CuZn39Pb3	–
---	-----------	---

–	–	–
–	282/283	–
–	266/4	–

M 8 x 1**1.5 mm (0.06")**

●/–	●/–	–
NPN	PNP	AC

–	KIB-M08NS/ 1.5-KL2	–	–	KIB-M08PS/ 1.5-KL2	–
–	650.2301.003	–	–	650.2901.003	–
–	263/4	–	–	263/1	–

–	●/–	–	–	●/–	–
---	-----	---	---	-----	---

–	KIB-M08NÖ/ 1.5-KL2	–	–	KIB-M08PÓ/ 1.5-KL2	–
–	650.2101.001	–	–	650.2701.001	–
–	263/5	–	–	263/2	–

–	●/–	–	–	●/–	–
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–	–	–	–	–	–
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–	–	–	–	–	–
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–	–	–	–	–	–
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–	–	–	–	–	–
---	---	---	---	---	---

–	–	–	–	–	–
---	---	---	---	---	---

–	10–36 V	10–36 V	–	10–36 V	10–36 V
–	–200 mA	–200 mA	–	–200 mA	–200 mA
–	1000 Hz	1000 Hz	–	1000 Hz	1000 Hz

–	●	–	–	●	–
–	●/–	–	–	●/–	–

–	–	–	–	–	–
---	---	---	---	---	---

–	–25 °C/+70 °C	–25 °C/+70 °C	–	–25 °C/+70 °C	–25 °C/+70 °C
–	–13 °F/+158 °F	–13 °F/+158 °F	–	–13 °F/+158 °F	–13 °F/+158 °F

–	IP 67/NEMA 4	IP 67/NEMA 4	–	IP 67/NEMA 4	IP 67/NEMA 4
---	--------------	--------------	---	--------------	--------------

–	stainless steel 1.4305	stainless steel 1.4305	–	stainless steel 1.4305	stainless steel 1.4305
---	------------------------	------------------------	---	------------------------	------------------------

–	–	–	–	–	–
–	PVC 3x0.14	PVC 3x0.14	–	–	–
–	–	–	–	282/283	282/283
–	–	–	–	–	–

M 8 x 1**1.5 mm (0.06")**

●/–	●/–	–
NPN	PNP	AC

–	KIB-M08NS/ 1.5-KLSM8	–	–	KIB-M08PS/ 1.5-KLSM8	–
–	650.2342.003	–	–	650.2942.005	–
–	263/4	–	–	263/1	–

–	–/●	–	–	●/–	–
---	-----	---	---	-----	---

–	–	–	–	KIB-M08PÓ/ 1.5-KLSM8	–
–	–	–	–	650.2742.001	–
–	–	–	–	263/2	–

–	–/●	–	–	●/–	–
---	-----	---	---	-----	---

–	–	–	–	–	–
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–	–	–	–	–	–
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–	–	–	–	–	–
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–	–	–	–	–	–
---	---	---	---	---	---

–	–	–	–	–	–
---	---	---	---	---	---

–	–	–	–	–	–
---	---	---	---	---	---

–	10–36 V	10–36 V	–	10–36 V	10–36 V
–	–200 mA	–200 mA	–	–200 mA	–200 mA
–	1000 Hz	1000 Hz	–	1000 Hz	1000 Hz

–	●	–	–	●	–
–	●/–	–	–	●/–	–

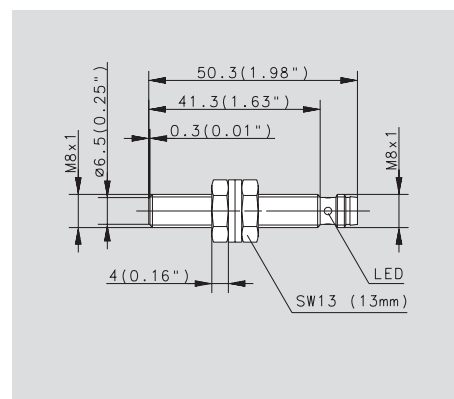
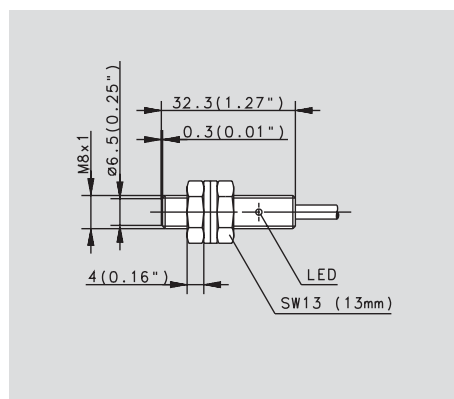
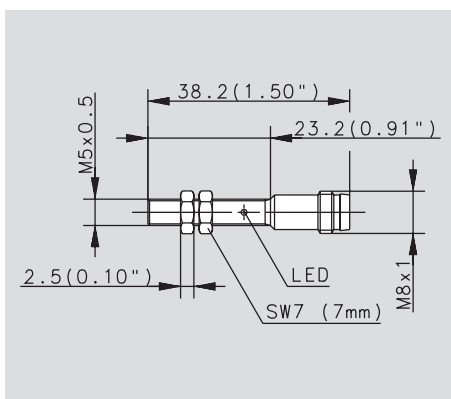
–	–	–	–	–	–
---	---	---	---	---	---

–	–25 °C/+70 °C	–25 °C/+70 °C	–	–25 °C/+70 °C	–25 °C/+70 °C
–	–13 °F/+158 °F	–13 °F/+158 °F	–	–13 °F/+158 °F	–13 °F/+158 °F

–	IP 67/NEMA 4	IP 67/NEMA 4	–	IP 67/NEMA 4	IP 67/NEMA 4
---	--------------	--------------	---	--------------	--------------

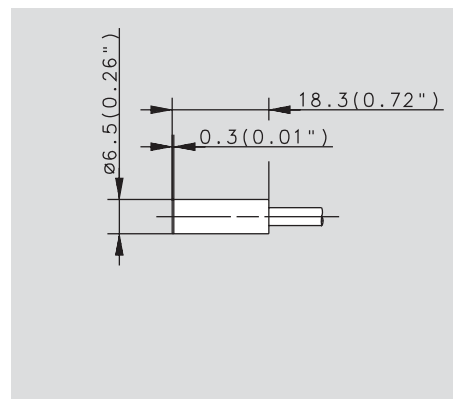
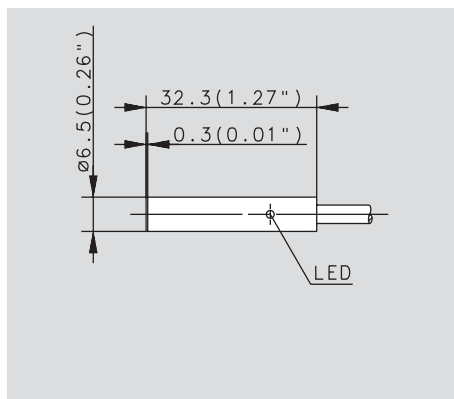
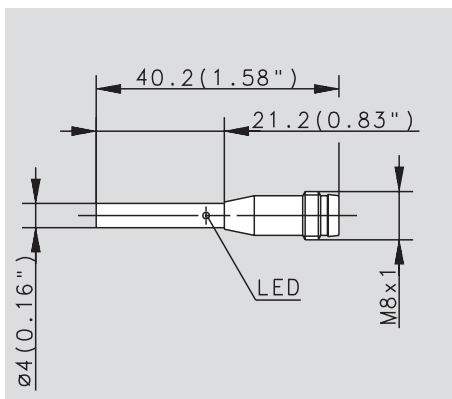
–	stainless steel 1.4305	stainless steel 1.4305	–	stainless steel 1.4305	stainless steel 1.4305
---	------------------------	------------------------	---	------------------------	------------------------

–	–	–	–	–	–
–	–	–	–	–	–
–	282/283	282/283	–	282/283	282/283
–	–	–	–	–	–





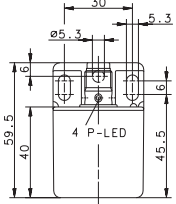
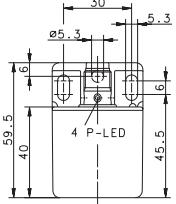



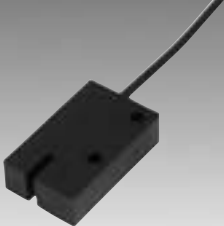
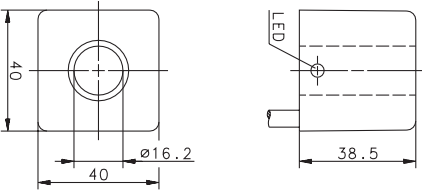
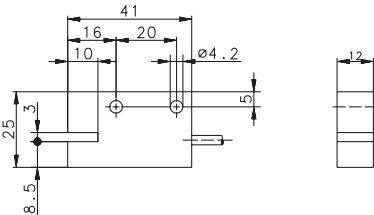
Ø 4			Ø 6.5			Ø 6.5		
0.8 mm (0.03")			1.5 mm (0.06")			1.5 mm (0.06")		
●/-	●/-	-	●/-	●/-	-	-	●/-	-
NPN	PNP	AC	NPN	PNP	AC	NPN	PNP	AC
KIB-D04NS/ 0.8-KLSM8	KIB-D04PS/ 0.8-KLSM8	-	KIB-D06NS/ 1.5-KL2	KIB-D06PS/ 1.5-KL2	-	-	KIB-D06PS/ 1.5-K2VPU	-
650.2399.015	650.2999.017	-	650.2399.009	650.2999.010	-	-	650.2999.034	-
263/4	263/1	-	263/4	263/1	-	-	263/1	-
-/●	●/-	-	-/●	●/-	-	-	●/-	-
-	-	-	-	KIB-D06PÖ/ 1.5-KL2	-	-	-	-
-	-	-	-	650.2799.011	-	-	-	-
-	-	-	-	263/2	-	-	-	-
-	-	-	-	-/●	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-
10-30 V	10-30 V	-	10-36 V	10-36 V	-	-	10-36 V	-
-/200 mA	-/200 mA	-	-/200 mA	-/200 mA	-	-	-/200 mA	-
3000 Hz	3000 Hz	-	1000 Hz	1000 Hz	-	-	1000 Hz	-
●	●	-	●	●	-	-	●	-
●/-	●/-	-	●/-	●/-	-	-	-	-
-	-	-	-	-	-	-	-	-
-25 °C/+70 °C	-25 °C/+70 °C	-	-25 °C/+70 °C	-25 °C/+70 °C	-	-	-25 °C/+70 °C	-
-13 °F/+158 °F	-13 °F/+158 °F	-	-13 °F/+158 °F	-13 °F/+158 °F	-	-	-13 °F/+158 °F	-
IP 67/NEMA 4	IP 67/NEMA 4	-	IP 67/NEMA 4	IP 67/NEMA 4	-	-	IP 67/NEMA 4	-
stainless steel 1.4305	stainless steel 1.4305	-	stainless steel 1.4401	stainless steel 1.4401	-	-	stainless steel 1.4401	-
-	-	-	PVC 3x0.14	PVC 3x0.14	-	-	PUR 3x0.14	-
282/283	282/283	-	-	-	-	-	-	-
266/3	266/3	-	266/5	266/5	-	-	266/5	-



Inductive sensors

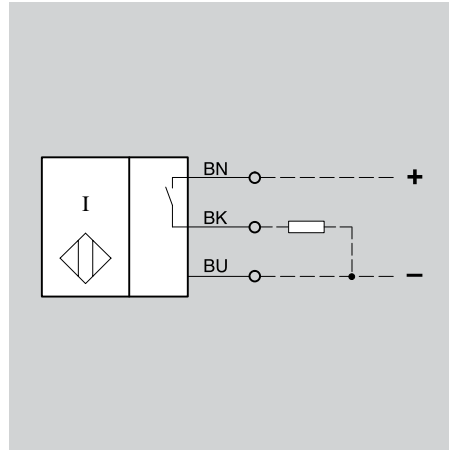
Special-purpose design

Type N40	15 mm sensing distance		20 mm sensing distance	
				
	Flush design		Non-flush design	
	M12 plug/PNP NO contact	M12 plug/PNP NC contact	M12 plug/PNP NO contact	M12 plug/PNP NO contact
Model description Part number	KIB-N40PS/015-KLS12 650.2988.001	KIB-N40PÖ/015-KLS12 650.2788.001	KIN-N40PS/020-KLS12 650.2982.003	KIN-N40PÖ/020-KLS12 650.2782.001
Dimensions				

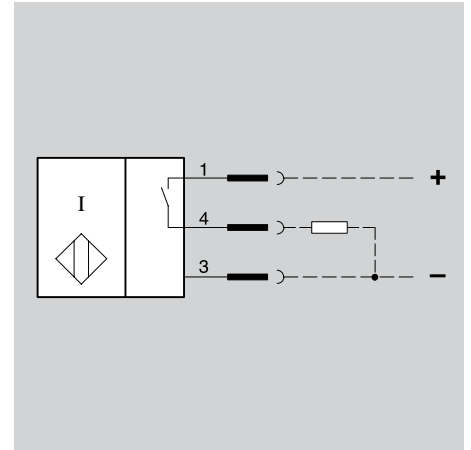
Type N40 – Ring sensor Type S03 – Slot sensor	Ring sensor Ø 16 mm		Slot sensor 3 mm slot width	
				
	6 m cable		2 m cable	
	PNP-NO contact	NPN-NO contact	PNP-NO contact	NPN-NO contact
Model description Part number	KIR-N40PS/000-KL6 650.2999.036	KIR-N40NS/000-KL6 660.2399.375	KIN-S03PS/003K2 650.2999.035	–
Dimensions				

Wiring diagrams

Type N40, cable version
Type SO3, slot sensor



Type N40, plug version



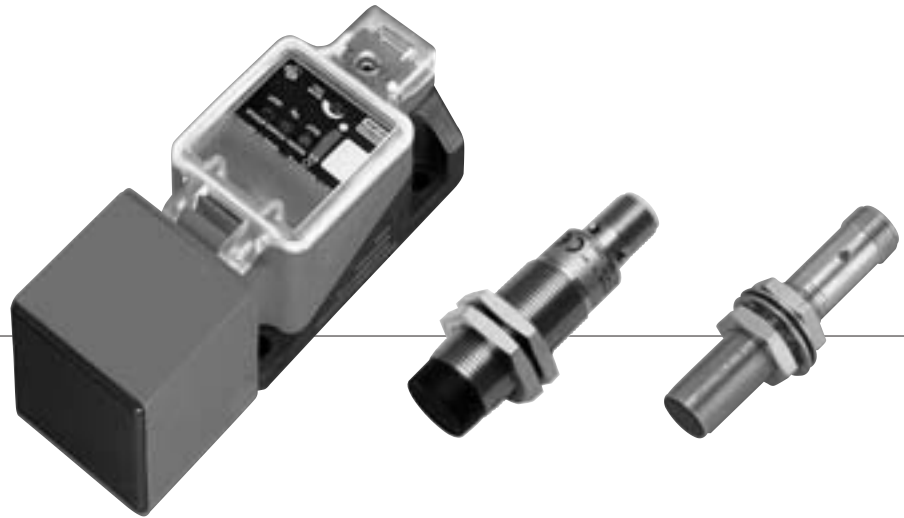
Accessories

Cable couplings see page 284 ff.

General data

	N40 flush	N40 non-flush	N40 Ring sensor	N40 Slot sensor
Operating voltage	10–36 V		10–30 V	
Rated operating voltage	≤ 200 mA			
Switching hysteresis	10% from rated switching distance		–	
Reproducibility	≤ 5%			
Switching frequency	100 Hz	50 Hz	4000 Hz	
Output	continuous short-circuit- and overload proof			
Polarity reversal protection	yes			
Rated switching distance	15 mm	20 mm	Immersion approx. 20 mm	Immersion approx. 7 mm
Functions-/operating voltage display	●/–	●/–	●/–	–/–
Ambient temperature	– 25 °C to + 70 °C			
Protection class	IP 67 according to IEC 529, EN 60 529			
Enclosure	PA6		PA6	
Connection	S12 plug		cable 3 x 0.5 mm ²	cable 3 x 0.14 mm ²

Programmable inductive sensors



Principle

These sensors work on the conventional inductive principle, nevertheless they can, thanks to their adaptable properties, be universally adapted for many applications.

With this learning capability (the so-called teach-in function), the sensors can be split into two groups:

- Sensors with teach-in-function for distance sensing
- Sensors with teach-in-function for speed monitoring

The following demonstrates two application examples:

A practical application is the sensing range of targets, which due to changing conditions, e.g. operating conditions or wear and tear, would require a constant re-adjustment.

Through a simple voltage pulse or PLC the necessary programmable pulse can be directed to the sensor and the learning process initiated. The programmable pulse can vary within the voltage range of U_B .

A further application for teach-in sensors is the speed monitoring of rotating shafts (detection by gear wheels) with changing, rotational frequencies. Here a simple voltage pulse or PLC can be used to set the necessary programmable pulse to "learn" the maximum operating frequency. Additional control devices with power supply and complicated evaluating electronics are not necessary.

Mode of operation

The teach-in-function is achieved by an A/D-converter which permanently stores and compare the values in EEPROM (Electrical Erasable Read Only Memory).

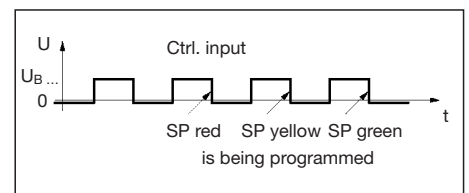
The EEPROM data can be safely stored for at least 40 years with the number of read/write-operations said to be 1.000.000.

By using a micro-controller for signal processing, Bernstein sensors can also be re-programmed to meet specific customer requirements for especially difficult tasks.

Variations

BERNSTEIN delivers the programmable inductive sensor in different enclosure designs and with a varying range of technical features.

The multi-norm version has three programmable switching outputs. With this type of sensor, four positive impulse signals are expected one after the other on the control line. At the first impulse signal, the sensor switches to the programming mode. After each following impulse signal, the actual distance to the targeted object is assigned to an output (Teach-in sensing distance).



Programming for multi-norm version

The teach-in speed monitor sensors are available in M12 and M18 enclosures in plug and cable versions and PNP-version (special types on request).

General data

Enclosure material	PA6.6 ¹⁾ / CuZn39Pb3 ²⁾
Protection class according to IEC	IP 65 ¹⁾ / IP 67 ²⁾
Operating temperature	-25 °C bis +70 °C
Storage temperature	-40 °C bis +80 °C
Sensing distance	programmable, 20..40 mm ¹⁾ / 8..16 mm ²⁾

Teach-in distance sensing sensors

Enclosure material	PA6.6 ¹⁾ / CuZn39Pb3 ²⁾
Protection class according to IEC	IP 65 ¹⁾ / IP 67 ²⁾
Operating temperature	-25 °C bis +70 °C
Storage temperature	-40 °C bis +80 °C
Sensing distance	programmable, 20..40 mm ¹⁾ / 8..16 mm ²⁾

Teach-in speed monitoring sensors

Enclosure material	CuZn39Pb3
Protection class according to IEC	IP 67
Operating temperature	-25 °C bis +70 °C
Storage temperature	-40 °C bis +80 °C
Sensing distance	2 mm ³⁾ / 5 mm ⁴⁾

Electrical data

Switching frequency	3 Hz
Hysteresis	≤ 10% (from programmed sensing distance)
Open-circuit current	< 10 mA ¹⁾ / < 11 mA ²⁾
Voltage drop	≤ 1.5 V
Polarisation protection	yes
Overload-/short-circuit withstand capability	yes
Repeat accuracy	≤ 5%

Switching frequency	programmable, 1..5000 Hz
Hysteresis	≤ 15% (from progr. switching frequency)
Open-circuit current	< 11 mA
Voltage drop	≤ 2.5 V
Polarisation protection	yes
Overload-/short-circuit withstand capability	yes
Repeat accuracy	≤ 5%

¹⁾ European standard enclosure (N44 series Multinorm)

²⁾ Metric design (M12 / M18)

³⁾ Metric design M12

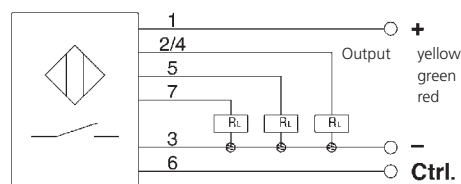
⁴⁾ Metric design M18

Advantages

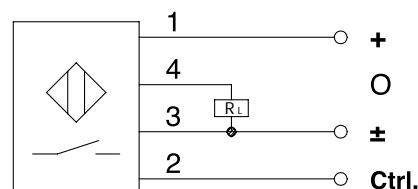
- Sensor adjustment is easy
- Calibration in the application
- Sensors can be re-programmed without additional mounting effort
- One sensor can scan a number of switching points
- Programming from control panel possible
- High process safety due to tolerance minimisation
- High repeat accuracy

Teach-in distance sensing sensors

Connection diagram, N44

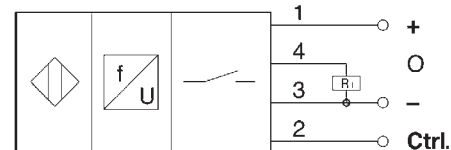


Connection diagram, M18



Teach-in speed monitoring sensors

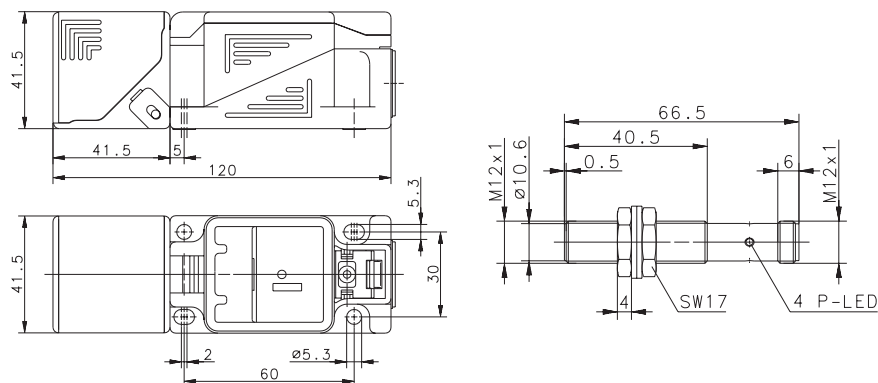
Connection diagram, M12/M18



Version

Designation	KIN-N44PS/040-KLSE	KIB-M12PS/002-KLS12I	KIB-M12PS/002-KL2I
Part number	650.2954.015¹⁾	650.2943.014¹⁾	650.2903.024²⁾
Operating voltage	10 – 30 V DC	10 – 36 V DC	10 – 36 V DC
Switching current	≤ 200 mA	≤ 200 mA	≤ 200 mA
Switching distances / prog. switching frequencies	20...40 mm / –	– / 1...5000 Hz	– / 1...5000 Hz

Dimensions

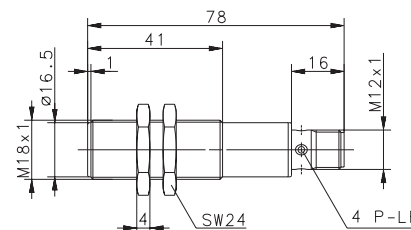


Version

Designation	KIB-M18PS/005-KLS12I	KIB-M18PS/005-KL2I
Part number	650.2940.004¹⁾	650.2905.021¹⁾
Operating voltage	10 – 30 V DC	10 – 30 V DC
Switching current	≤ 200 mA	≤ 200 mA
Switching distance/frequency programmable	– / 1...5000 Hz	– / 1...5000 Hz

Dimensions

- ¹⁾ S12 plug version
for connection coupling 413.9100.299
- ²⁾ Cable type 2 m





Rated operating distance
Mounting flush /non-flush
Switching functions
Model description
Part number
Wiring diagram (page/Pos.)
Stock status: Ex stock/Built to order
Mechanical data
Housing material
Cable length 2 m/6.5 ft. mm
Accessories (page/Pos.)

M 5; 25 mm length

1 mm (0.04")

●/-
NAMUR / B
KIB-M05EA/ 001-2
658.1699.009
263/8
●/-

M 8 x 1; 32 mm length

1.5 mm (0.06")

●/-
NAMUR / A
KIB-M08EA/ 1.5-2
658.1601.001
263/8
●/-

CuZn39Pb3
PVC 2 x 0.14

stainless steel 1.4305
PVC 2 x 0.25



Rated operating distance
Mounting flush /non-flush
Switching functions
Model description
Part number
Wiring diagram (page/Pos.)
Stock status: Ex stock/Built to order
Mechanical data
Housing material
Cable length 2 m/6.5 ft. mm
Accessories (page/Pos.)

M 8 x 1; 32 mm length

2 mm (0.08")

-/●
NAMUR / A
KIN-M08EA/ 002-2
658.1601.002
263/8
-/●

M 12 x 1; 30 mm length

2 mm (0.08")

●/-
NAMUR / A
KIB-M12EA/ 002-2
658.1624.004
263/8
●/-

stainless steel 1.4305
PVC 2 x 0.25

CuZn39Pb3
PVC 2 x 0.25

Electrical and mechanical data for NAMUR inductive sensors

Electrical data
Nominal input voltage 8.2 V DC
Input resistance 1 kΩ

Mechanical data
Temperature range min./max. -25 °C/+70 °C
-13 °F/+158 °F

Protection class IP 67/NEMA 4

Output current

	Diagram A	Diagram B
damped	≤ 1 mA	≤ 1.1 mA
undamped	≥ 4 mA	≥ 2.2 mA



M 12 x 1; 32 mm length

4 mm (0.16")

-/●

NAMUR / A

KIN-M12EA/

004-2

658.1625.006

263/8

●/-

CuZn39Pb3

PVC 2 x 0.25

-



M 18 x 1; 35 mm length

5 mm (0.20")

●/-

NAMUR / A

KIB-M18EA/

005-2

658.1626.007

263/8

●/-

CuZn39Pb3

PVC 2 x 0.5

-



M 18 x 1; 35 mm length

8 mm (0.32")

-/●

NAMUR / A

KIN-M18EA/

008-2

658.1627.008

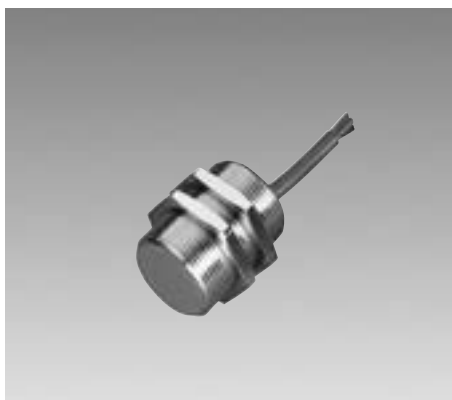
263/8

-/●

CuZn39Pb3

PVC 2 x 0.5

-



M 30 x 1,5; 31 mm length

10 mm (0.39")

●/-

NAMUR / A

KIB-M30EA/

010-2

658.1699.010

263/8

●/-

CuZn39Pb3

PVC 2 x 0.5

-

