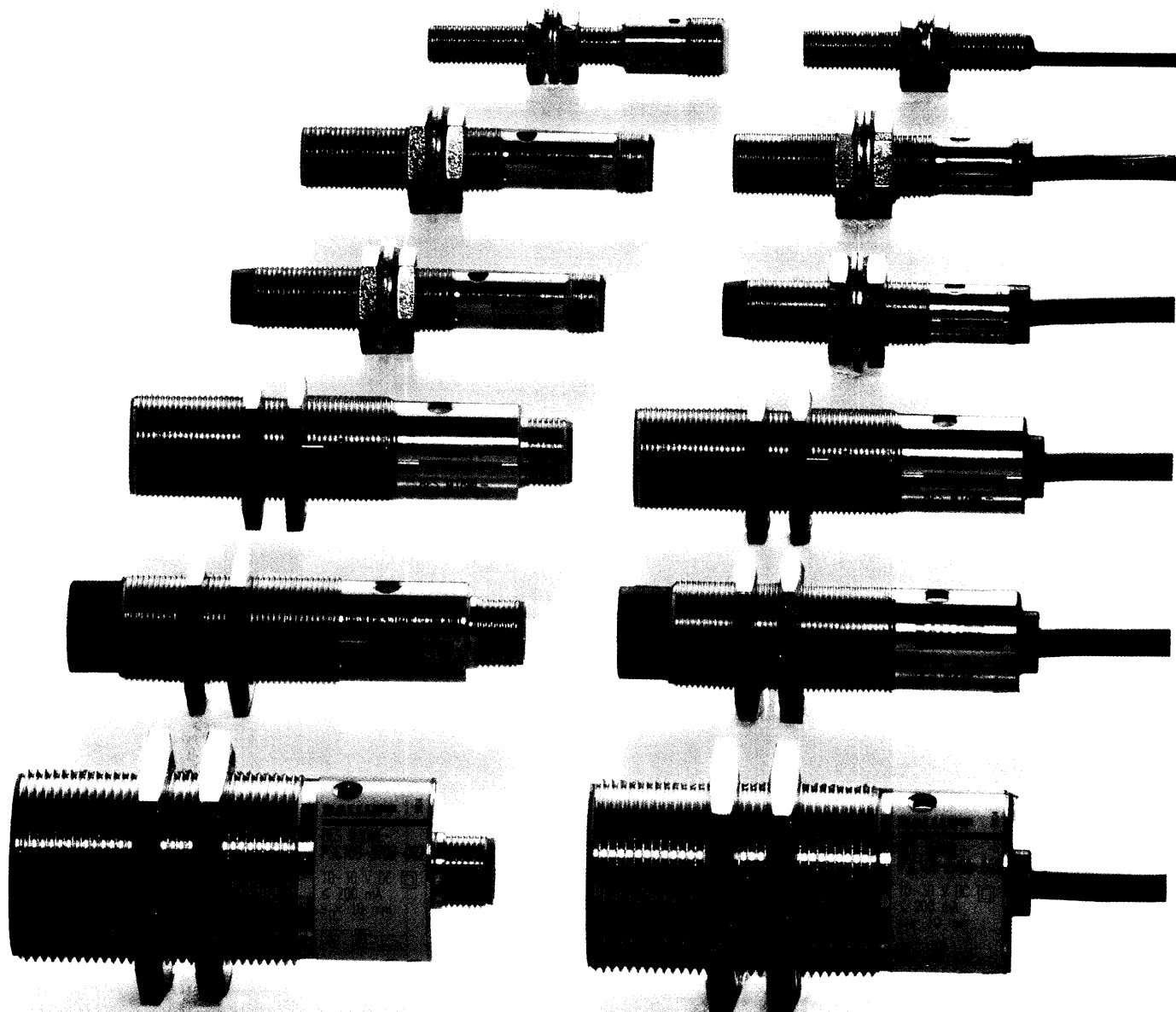


BALLUFF

PROXICOM –
the economical
standard sensors



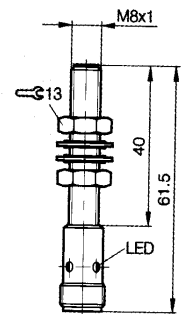
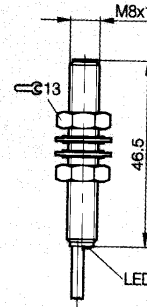
Inductive Sensors

DC 3-Wire
M8, M12, M18
s_n 1,5, 2, 2.5, 4, 5, 8 mm

Housing size	M8x1	M8x1
Mounting	flush	flush
Rated operating distance s _n	1.5 mm	1.5 mm
Assured operating distance s _a	0...1.2 mm	0...1.2 mm



PROXICOM – the economical standard sensors



PX0490

PX0587

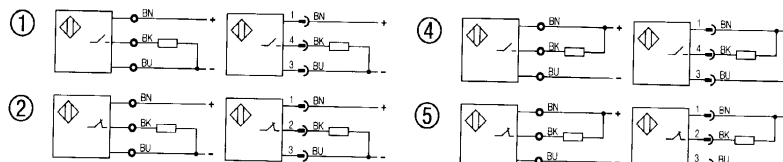
Balluff inductive sensors are used for controlling, regulating, automating, positioning and monitoring of work processes. They are rugged sensors which detect the presence of a metal part. They operate without contact and have an electronic output, i.e. they are wear-free. Applications include machine tools, plastics machinery, textile machines, assembly lines, in the automobile industry, in wood processing machinery, in other words everywhere processes need to be automated.

- non-contact
- wear-free
- short-circuit protected
- function display with LED
- virtually unlimited life
- contamination insensitive
- reliable even under extreme conditions

PNP	Normally-open ①	BES M08EL-PSC15B-BV	BES M08EL-PSC15B-S04G
	Normally-closed ②	BES M08EL-POC15B-BV	
NPN	Normally-open ④	BES M08EL-NSC15B-BV	BES M08EL-NSC15B-S04G
	Normally-closed ⑤	BES M08EL-NOC15B-BV	
Rated operational voltage U _e		24 V DC	24 V DC
Supply voltage U _B		10...30 V DC	10...30 V DC
Voltage drop U _d at I _e		≤ 1.5 V	≤ 1.5 V
Rated insulation voltage U _i		250 V AC	250 V AC
Rated operational current I _e		200 mA	200 mA
No-load supply current I ₀ d./und.		≤ 8 mA/≤ 1 mA	≤ 8 mA/≤ 1 mA
Off-state current I _r		≤ 10 μA	≤ 10 μA
Protected against polarity reversal		yes	yes
Short circuit protected		yes	yes
Load capacity		≤ 0.5 μF	≤ 0.5 μF
Repeat accuracy R		≤ 5 %	≤ 5 %
Ambient temperature range T _a		-25...+70 °C	-25...+70 °C
Frequency of operating cycles f		1500 Hz	1500 Hz
Utilization categories		DC 13	DC 13
Function indication		yes	yes
Degree of protection per IEC 529		IP 67	IP 67
Insulation Class		□	□
Housing material		metal	metal
Material of sensing face		PBTP	PBTP
Connection		cabl	connector
No. of wires x conductor cross section		3 x 0.14 mm ²	
Approvals		C-UL US	C-UL US
Recommended connector			BKS-S 19/BKS-S 20

Please add the cable to the ordering code for sensors with molded cable!
03, 05 = PVC 3 m or 5 m length

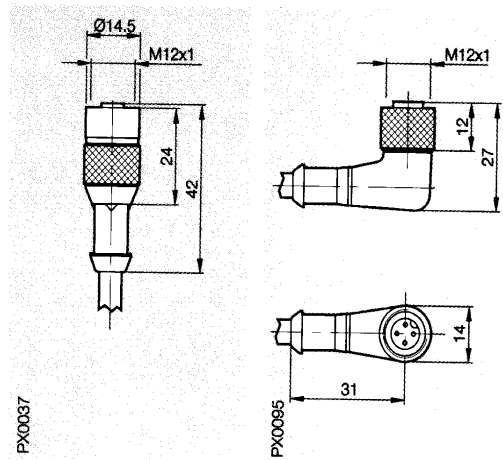
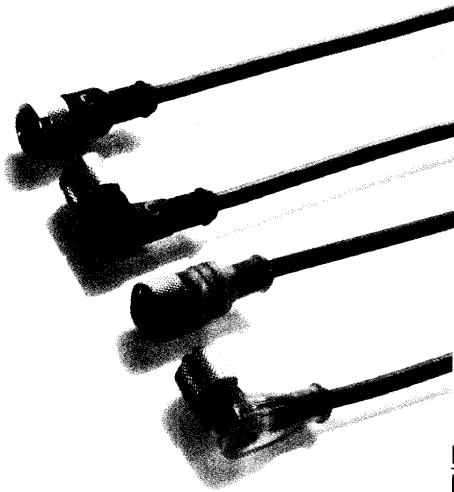
Connection Diagrams



Accessories

DC Connectors
for S 4 Sensors

Connector	BKS-B 19/BKS-S 19	BKS-B 20/BKS-S 20
Connector type	straight	angle
Use with	plug switch S 4	plug switch S 4



Economical – no LED

Normally-open		BKS-B 19-1-	BKS-B 20-1-
Normally-closed			BKS-B 20-2-
With LED			
Normally-open	PNP	BKS-S 19-4-	BKS-S 20-4-
Normally-closed	PNP		BKS-S 20-5-

Supply voltage U_B	10...30 V DC	10...30 V DC
Cable	fully potted PVC,PUR	fully potted PVC,PUR
Conductor cross section	3 x 0,34 mm ² /4 x 0,25 mm ²	3 x 0,34 mm ² /4 x 0,25 mm ²
Degree of protection	IP 68 per BWN Pr. 20	IP 68 per BWN Pr. 20
Ambient temperature range T_a	-25...+ 90 °C	-25...+ 90 °C
Function indication LED yellow	selectable yes/no	selectable yes/no
Supply voltage indication LED green	selectable yes/no	selectable yes/no
Also available with PuFlex-cable	yes	yes

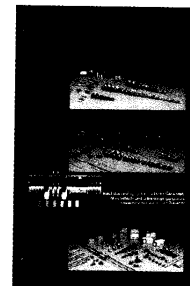
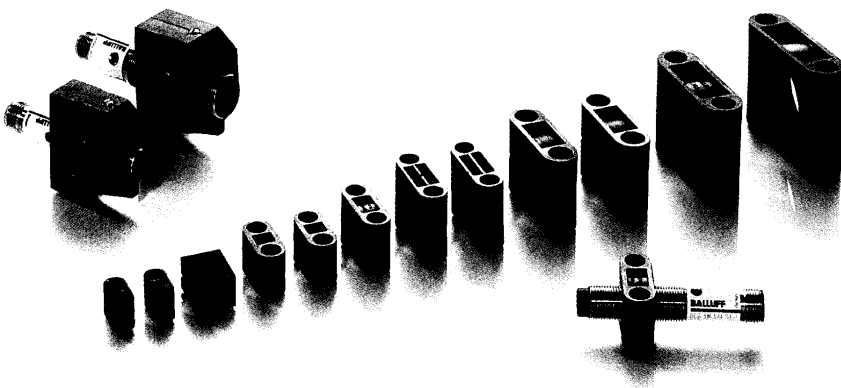
Please add the cable length to the ordering code!

03, 05 = PVC 3 m or 5 m length

PU-03, PU-05 = PuFlex 3 m or 5 m length

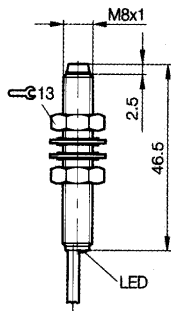
Don't forget the accessories!

More accessories
in the main catalog!

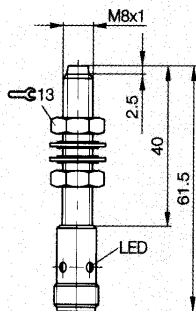


Gebhard Balluff GmbH & Co.
Gartenstrasse 21-25
D-73765 Neuhausen/Germany
Phone +49 (0) 71 58/1 73-0
Fax +49 (0) 71 58/50 10
E-Mail: balluff@balluff.de

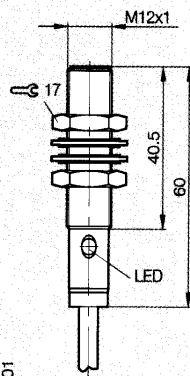
	M8x1 non flush 2.5 mm 0...2 mm	M8x1 non flush 2.5 mm 0...2 mm	M12x1 flush 2 mm 0...1.6 mm	M12x1 flush 2 mm 0...1.6 mm	M12x1 non flush 4 mm 0...3.2 mm
--	---	---	--	--	--



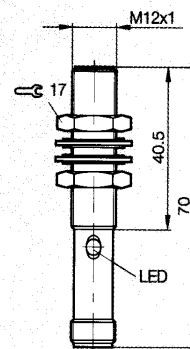
PX0492



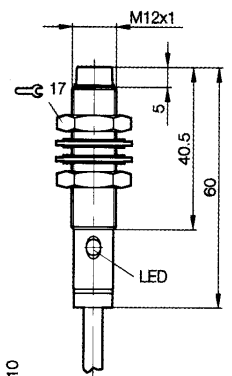
PX0144



PX0001

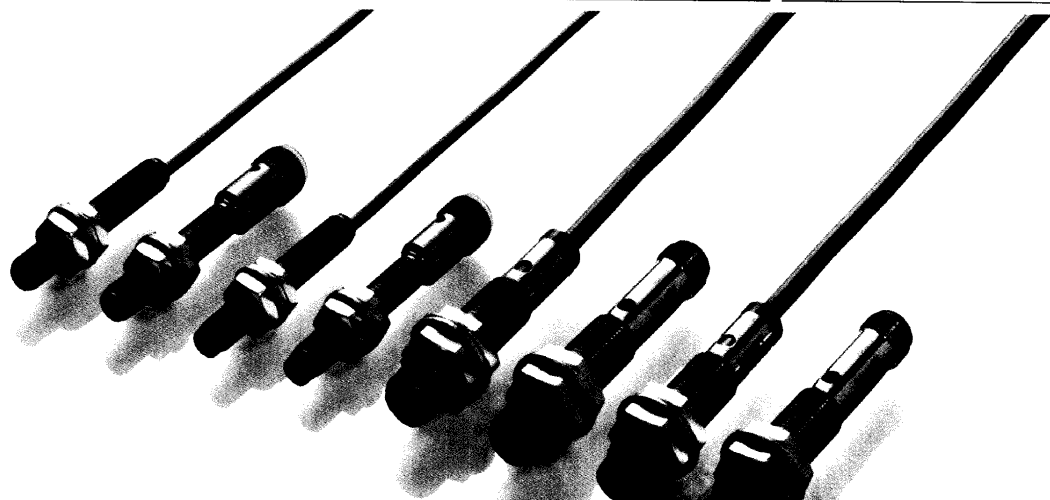


PX0092



PX0010

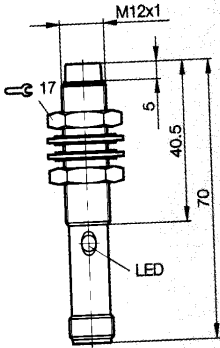
BES M08EL-PSC25F-BV	BES M08EL-PSC25F-S04G	BES M12ML-PSC20B-BV BES M12ML-POC20B-BV	BES M12ML-PSC20B-S04G BES M12ML-POC20B-S04G	BES M12ML-PSC40F-BV BES M12ML-POC40F-BV
BES M08EL-NSC25F-BV	BES M08EL-NSC25F-S04G	BES M12ML-NSC20B-BV BES M12ML-NOC20B-BV	BES M12ML-NSC20B-S04G	BES M12ML-NSC40F-BV
24 V DC	24 V DC	24 V DC	24 V DC	24 V DC
10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V	≤ 1.5 V
250 V AC	250 V AC	250 V AC	250 V AC	250 V AC
200 mA	200 mA	200 mA	200 mA	200 mA
≤ 8 mA/≤ 1 mA	≤ 8 mA/≤ 1 mA	≤ 8 mA/≤ 1 mA	≤ 8 mA/≤ 1 mA	≤ 8 mA/≤ 1 mA
≤ 10 μA	≤ 10 μA	≤ 10 μA	≤ 10 μA	≤ 10 μA
yes	yes	yes	yes	yes
yes	yes	yes	yes	yes
≤ 0.5 μF	≤ 0.5 μF	≤ 0.5 μF	≤ 0.5 μF	≤ 0.5 μF
≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %
-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
800 Hz	800 Hz	1500 Hz	1500 Hz	800 Hz
DC 13	DC 13	DC 13	DC 13	DC 13
yes	yes	yes	yes	yes
IP 67	IP 67	IP 67	IP 67	IP 67
metal	metal	metal	metal	metal
PBTP	PBTP	PA 12	PA 12	PA 12
cable	connector	cable	connector	cable
3 × 0.14 mm ²		3 × 0.34 mm ²		3 × 0.34 mm ²
C-UL US	C-UL US	C-UL US	C-UL US	C-UL US
	BKS-S 19/BKS-S 20		BKS-S 19/BKS-S 20	



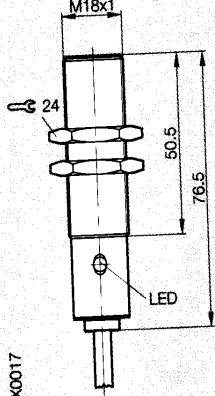
Inductive Sensors

DC 3-Wire
M8, M12, M18
S_n 1,5, 2, 2.5, 4, 5, 8 mm

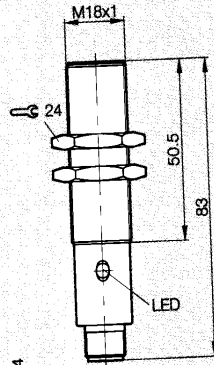
M12x1 non flush 4 mm 0...3.2 mm	M18x1 flush 5 mm 0...4 mm	M18x1 flush 5 mm 0...4 mm	M18x1 non flush 8 mm 0...6.5 mm	M18x1 non flush 8 mm 0...6.5 mm
--	--	--	--	--



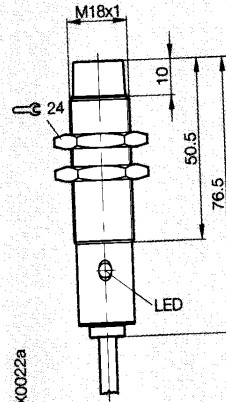
PX00055



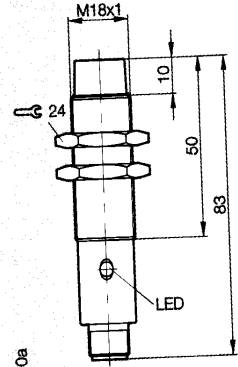
PX0017



PX0034



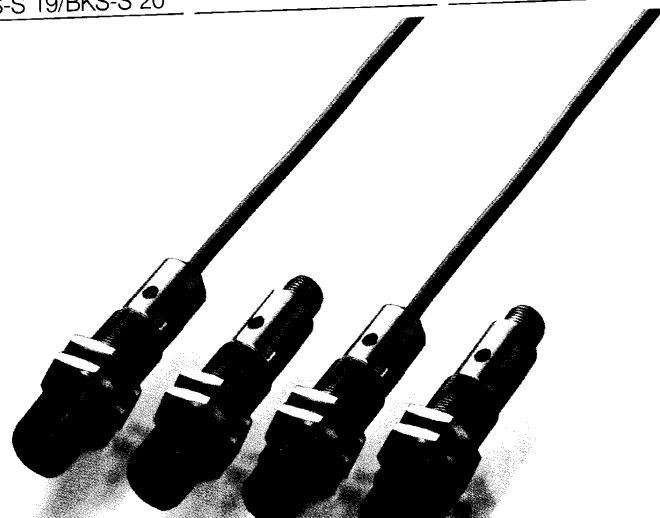
PX0022a



PX0100a

BES M12ML-PSC40F-S04G	BES M18ML-PSC50B-BV BES M18ML-POC50B-BV	BES M18ML-PSC50B-S04G BES M18ML-POC50B-S04G	BES M18ML-PSC80F-BV	BES M18ML-PSC80F-S04G BES M18ML-POC80F-S04G
BES M12ML-NSC40F-S04G	BES M18ML-NSC50B-BV BES M18ML-NOC50B-BV	BES M18ML-NSC50B-S04G	BES M18ML-NSC80F-BV	BES M18ML-NSC80F-S04G
24 V DC 10...30 V DC ≤ 1.5 V 250 V AC 200 mA ≤ 8 mA/≤ 1 mA ≤ 10 μA yes yes ≤ 0.5 μF	24 V DC 10...30 V DC ≤ 1.5 V 250 V AC 200 mA ≤ 8 mA/≤ 1 mA ≤ 10 μA yes yes ≤ 0.8 μF	24 V DC 10...30 V DC ≤ 1.5 V 250 V AC 200 mA ≤ 8 mA/≤ 1 mA ≤ 10 μA yes yes ≤ 0.8 μF	24 V DC 10...30 V DC ≤ 1.5 V 250 V AC 200 mA ≤ 8 mA/≤ 1 mA ≤ 10 μA yes yes ≤ 0.8 μF	24 V DC 10...30 V DC ≤ 1.5 V 250 V AC 200 mA ≤ 8 mA/≤ 1 mA ≤ 10 μA yes yes ≤ 0.8 μF
≤ 5 % -25...+70 °C 800 Hz DC 13 yes	≤ 5 % -25...+70 °C 750 Hz DC 13 yes	≤ 5 % -25...+70 °C 750 Hz DC 13 yes	≤ 5 % -25...+70 °C 300 Hz DC 13 yes	≤ 5 % -25...+70 °C 300 Hz DC 13 yes
IP 67 ☐ metal PA 12 connector	IP 67 ☐ metal PA 12 cable	IP 67 ☐ metal PA 12 connector	IP 67 ☐ metal PA 12 cable	IP 67 ☐ metal PA 12 connector
C-UL US BKS-S 19/BKS-S 20	3 × 0.34 mm ² C-UL US	C-UL US BKS-S 19/BKS-S 20	3 × 0.34 mm ² C-UL US	C-UL US BKS-S 19/BKS-S 20

PROXICOM



Inductive Sensors

DC 3-Wire
M30
s_n 10 mm, 15 mm

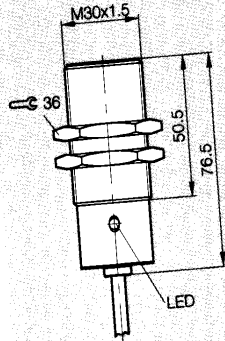
Housing size
Mounting
Rated operating distance s_n
Assured operating distance s_a

M30x1.5
flush
10 mm
0...8.1 mm

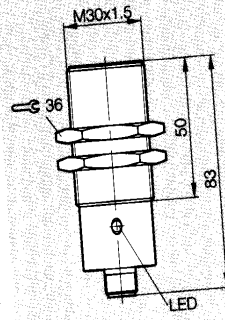
M30x1.5
flush
10 mm
0...8.1 mm

M30x1.5
non flush
15 mm
0...12.2 mm

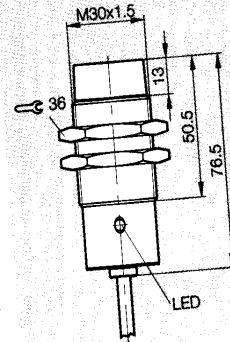
M30x1.5
non flush
15 mm
0...12.2 mm



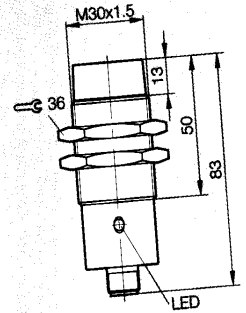
PX0023



PX0030



PX0024a



PX0102a

	BES M30ML-PSC10B-BV	BES M30ML-PSC10B-S04G	BES M30ML-PSC15F-BV	BES M30ML-PSC15F-S04G
PNP	Normally-open ① Normally-closed ②			
NPN	Normally-open ④ Normally-closed ⑤			
Rated operational voltage U _e	24 V DC	24 V DC	24 V DC	24 V DC
Supply voltage U _b	10...30 V DC	10...30 V DC	10...30 V DC	10...30 V DC
Voltage drop U _d at I _b	≤ 2.5 V	≤ 2.5 V	≤ 2.5 V	≤ 2.5 V
Rated insulation voltage U _i	250 V AC	250 V AC	250 V AC	250 V AC
Rated operational current I _b	200 mA	200 mA	200 mA	200 mA
No-load supply current I ₀ d./und.	≤ 25 mA/≤ 12 mA	≤ 25 mA/≤ 12 mA	≤ 25 mA/≤ 12 mA	≤ 25 mA/≤ 12 mA
Off-state current I _r	≤ 80 µA	≤ 80 µA	≤ 80 µA	≤ 80 µA
Protected against polarity reversal	yes	yes	yes	yes
Short circuit protected	yes	yes	yes	yes
Load capacity	≤ 1.0 µF	≤ 1.0 µF	≤ 1.0 µF	≤ 1.0 µF
Repeat accuracy R	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %
Ambient temperature range T _a	-25...+70 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
Frequency of operating cycles f	150 Hz	150 Hz	75 Hz	75 Hz
Utilization categories	DC 13	DC 13	DC 13	DC 13
Function indication	yes	yes	yes	yes
Degree of protection per IEC 529	IP 67	IP 67	IP 67	IP 67
Insulation Class	metal	metal	metal	metal
Housing material	PA 12	PA 12	PA 12	PA 12
Material of sensing face	cable	connector	cable	connector
Connection	3 x 0.34 mm ²	C-UL US	3 x 0.34 mm	C-UL US
No. of wires x conductor cross section	UL	BKS-S 19/BKS-S 20	C-UL US	BKS-S 19/BKS-S 20
Approvals				
Recommended connector				

Please add the cable length to the ordering code for sensors with molded cable!
03, 05 = PVC 3 m or 5 m length

