






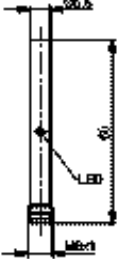
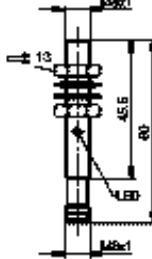
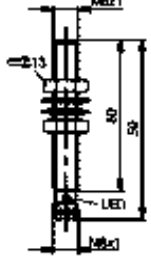
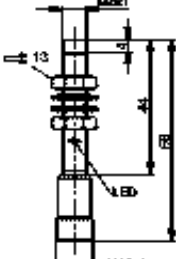
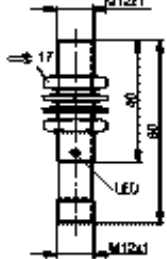
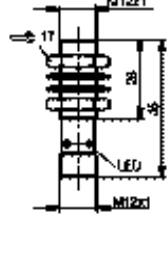




Inductive Sensors with Special Properties

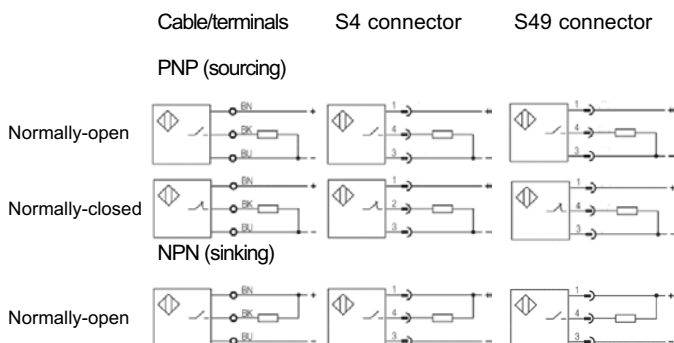
- **Triple-prox & Hyperprox series** - Triple and quadruple the normal sensing ranges of standard switches

Exclusive Triple Prox & Hyperprox

A truly unique range of sensors with **3x and 4x extended range**. The Triple Prox and Hyperprox line, with unsurpassed range allows the sensor to be mounted further from the target than ever before - reducing the risk of mechanical damage from collisions.

	 $\times S_n$	 $\times S_n$	 $\times S_n$	 $\times S_n$	 $\times S_n$	 $\times S_n$
Housing size	\varnothing 6.5 mm	M8x1	M8x1	M8x1	M12x1	M12x1
Mounting	quasi flush	quasi flush	quasi flush	non flush	quasi flush	quasi flush
Rated operating distance s_n	3 mm	3 mm	4 mm	6 mm	6 mm	6 mm
Assured operating distance s_a	0...2.4 mm	0...2.4 mm	0...2.9 mm	0...4.9 mm	0...4.9 mm	0...4.9 mm
 Optical Setup						
 Quick Change						
 Extended Range						
PNP Normally-open N/O	BES G06MI-PSC30B-S49G	BES M08MH1-PSC30B-S49G	BES M08MI-PSC40B-S49G	BES M08MG1-PSC60F-S04G	BES M12MG1-PSC60B-S04G	BES M12MD1-PSC60B-S04G
PNP Normally-closed N/C	BES G06MI-POC30B-S49G				BES M12MG1-POC60B-S04G	
NPN Normally-open N/O	BES G06MI-NSC30B-S49G	BES M08MH1-NSC30B-S49G	BES M08MI-NSC40B-S49G	BES M08MG1-NSC60F-S04G	BES M12MG1-NSC60B-S04G	BES M12MD1-NSC60B-S04G
Rated operational voltage U_e	24 V DC	24 V DC	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	10...30 V DC	10...30 V DC
Voltage drop U_d at I_e	≤ 2 V	≤ 2 V	≤ 2.5 V	≤ 2 V	≤ 2 V	≤ 2 V
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC	75 V DC	75 V DC	75 V DC
Rated operational current I_e	200 mA	200 mA	200 mA	200 mA	200 mA	200 mA
No-load supply current I_o max	≤ 12 mA	≤ 12 mA	≤ 10 mA	≤ 12 mA	≤ 10 mA	≤ 10 mA
Off-state current I_r	≤ 100 μ A	≤ 100 μ A	≤ 10 μ A	≤ 100 μ A	≤ 100 μ A	≤ 100 μ A
Protected against polarity reversal	yes	yes	yes	yes	yes	yes
Short circuit protected	yes	yes	yes	yes	yes	yes
Load capacity	≤ 1 μ F	≤ 1 μ F	≤ 1 μ F	≤ 1 μ F	≤ 1 μ F	≤ 1 μ F
Repeat accuracy R	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %	≤ 5 %
Ambient temperature range T_a	-25...+70 °C	-25...+70 °C	-0...+60 °C	-25...+70 °C	-25...+70 °C	-25...+70 °C
Frequency of operating cycles f	1000 Hz	1000 Hz	600 Hz	500 Hz	800 Hz	800 Hz
Utilization categories	DC 13	DC 13	DC 13	DC 13	DC 13	DC 13
Function indication	yes	yes	yes	yes	yes	yes
Degree of protection per IEC 60529	IP 67	IP 67	IP 67	IP 67	IP 67	IP 67
Housing material	CuZn chrome plated	CuZn chrome plated	CuZn chrome plated	CuZn chrome plated	CuZn chrome plated	CuZn chrome plated
Material of sensing face	PBT	PBT	PBT	PBT	PBT	PBT
Connection	connector	connector	connector	connector	connector	connector
Recommended connector	BK-403000E03M030	BK-403000E03M030	BK-403000E03M050	BK-804000E03M050	BK-804000E03M050	BK-804000E03M050

Connection Diagrams



Mounting Bracket Examples



For a comprehensive selection of mounting brackets refer to page 46



**Optical
Setup Aid**









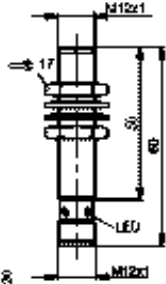
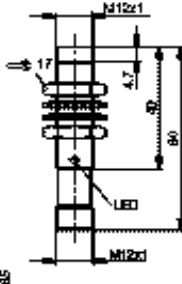
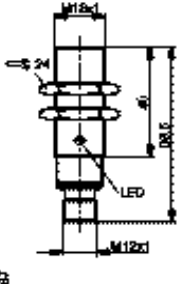
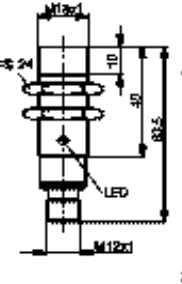
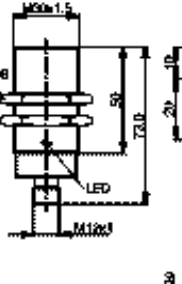
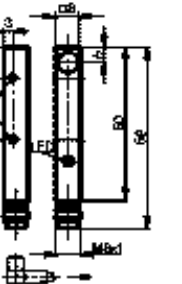
**Quick
Change**

**1234
xSn xSn xSn xSn**



**Extended
Range**

BALLUFF
Sensors Worldwide

Exclusive

	 M12x1 quasi flush 8 mm 0...5.8 mm	 M12x1 non flush 10 mm 0...6.5 mm	 M18x1 quasi flush 12 mm 0...9.7 mm	 M18x1 non flush 20mm 0...16.2 mm	 M30x1.5 quasi flush 22 mm 0...17.8 mm	 8x8x54 quasi flush 3 mm 0...2.4 mm	Housing size Mounting Rated operating distance s_n Assured operating distance s_a
							
BES M12MI-PSH80B-S04G	BES M12MF1-PSC10F-S04G	BES M18MG1-PSC12B-S04G	BES M18ME1-PSC20F-S04G	BES M30MI1-PSC22B-S04G	BES Q08MG-PSC30B-S49G	PNP Normally-open N/O PNP Normally-closed N/C	
BES M12MI-NSH80B-S04G	BES M12MF1-NSC10F-S04G	BES M18MG1-NSC12B-S04G	BES M18ME1-NSC20F-S04G	BES M30MI1-NSC22B-S04G	BES Q08MG-NSC30B-S49G	NPN Normally-open N/O	
24 V DC 10...55 V DC ≤ 2.5 V 75 V DC 200 mA ≤ 10 mA ≤ 100 µA yes yes ≤ 1 µF ≤ 10 % -0...+60 °C 300 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-804000E03M050	24 V DC 10...30 V DC ≤ 2 V 75 V DC 200 mA ≤ 10 mA ≤ 100 µA yes yes ≤ 1 µF ≤ 5 % -25...+70 °C 400 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-804000E03M050	24 V DC 10...30 V DC ≤ 2 V 75 V DC 200 mA ≤ 10 mA ≤ 100 µA yes yes ≤ 1 µF ≤ 5 % -25...+70 °C 500 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-804000E03M050	24 V DC 10...30 V DC ≤ 2 V 75 V DC 200 mA ≤ 10 mA ≤ 100 µA yes yes ≤ 1 µF ≤ 5 % -25...+70 °C 200 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-804000E03M050	24 V DC 10...30 V DC ≤ 2 V 75 V DC 200 mA ≤ 10 mA v 100 µA yes yes ≤ 1 µF ≤ 5 % -25...+70 °C 200 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-804000E03M050	24 V DC 10...30 V DC ≤ 2 V 75 V DC 200 mA ≤ 10 mA v 100 µA yes yes ≤ 1 µF ≤ 5 % -25...+70 °C 1000 Hz DC 13 yes IP 67 CuZn chrome plated PBT connector BK-403000E03M030	Rated operational voltage U_e Supply voltage U_s Voltage drop U_a at I_e Rated insulation voltage U_i Rated operational current I_e No-load supply current I_o max Off-state current I_r Protected against polarity reversal Short circuit protected Load capacity Repeat accuracy R Ambient temperature range T_a Frequency of operating cycles f Utilization categories Function indication Degree of protection per IEC 60529 Housing material Material of sensing face Connection Recommended connector	

Connector Cable Options

	S49 - M8 3 pole, 3 wire	S4 - M12 4 pole, 4 wire
Straight	3m BK-403000E03M030	BK-804000E03M030
	5m BK-403000E03M050	BK-804000E03M050
	10m BK-403000E03M100	BK-804000E03M100
90°	3m BK-403001E03M030	BK-804001E03M030
	5m BK-403001E03M050	BK-804001E03M050
	10m BK-403001E03M100	BK-804001E03M100

Replace E03 in part no with P03 for PUR cable - chemical resistant
Replace E03 in part no with S20 for SJTO braided cable - welding spec.

(Note: Standard 4 wire M12 connectors can be used for both normally open and normally closed sensors. 3 wire M12 connectors are available if required for normally open sensors only.)

This is a selection of our most popular items. To select from our full product range call us for our latest comprehensive catalogue 'The Sensor Line' (catalogue or CD)

