

BALLUFF

Inductive Distance Sensors BAW R03

... compact with generous measuring range

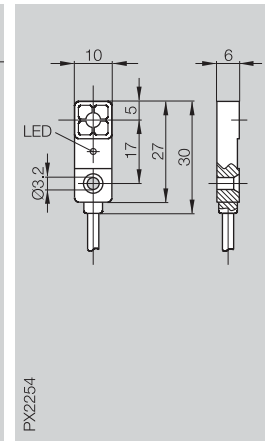
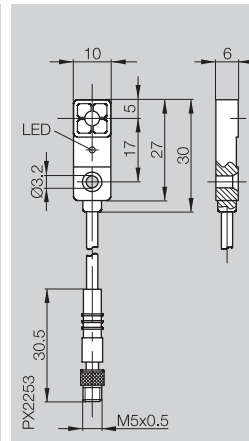
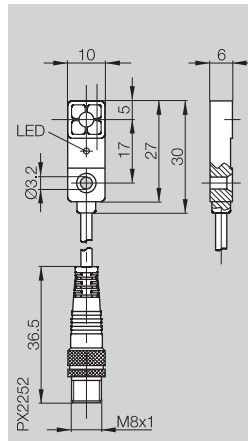
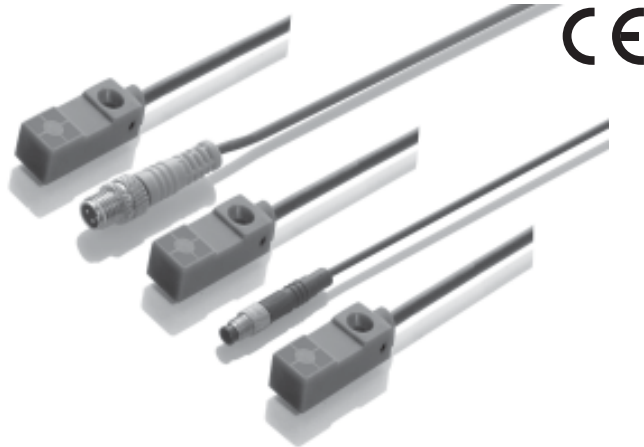


Inductive Distance Sensor

Mini housing – Maxi performance

ANALOG

Housing size	10×30×6 mm	10×30×6 mm	10×30×6 mm
Mounting	flush	flush	flush
Output signal	Voltage 0...10 V	Voltage 0...10 V	Voltage 0...10 V
Linear range s_L	1...4 mm	1...4 mm	1...4 mm



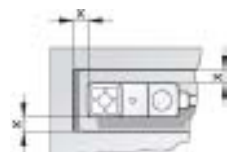
Analog block-style miniature sensors

- Small cross-section 10×6 mm
- Long sensing range
- Low height in detection direction
- Cable version or M8/M5 connector

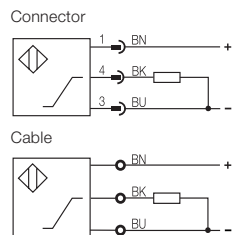
PNP analog	BAW R03KC-UAE40B-BP00,3-GS49	BAW R03KC-UAE40B-BP00,3-GS26	BAW R03KC-UAE40B-BP03
Rated operational voltage U_o	24 V DC	24 V DC	24 V DC
Supply voltage U_B	21.6...26.4 V DC	21.6...26.4 V DC	21.6...26.4 V DC
Ripple	$\leq 10\%$ of U_o	$\leq 10\%$ of U_o	$\leq 10\%$ of U_o
Rated insulation voltage U_i	75 V DC	75 V DC	75 V DC
Rated sensing distance s_o	2.5 mm	2.5 mm	2.5 mm
Load resistance R_L	$\geq 5\text{ k}\Omega$	$\geq 5\text{ k}\Omega$	$\geq 5\text{ k}\Omega$
No-load supply current I_o at U_o	$\leq 15\text{ mA}$	$\leq 15\text{ mA}$	$\leq 15\text{ mA}$
Polarity reversal protected	no	no	no
Short circuit protected	no	no	no
Adjustment indicator (end of linear range)	yes	yes	yes
Ambient temperature range T_a	0...+70 °C	0...+70 °C	0...+70 °C
Repeat accuracy R_{EWN}	$\pm 35\text{ }\mu\text{m}$	$\pm 35\text{ }\mu\text{m}$	$\pm 35\text{ }\mu\text{m}$
Non-linearity	$\leq \pm 150\text{ }\mu\text{m}$	$\leq \pm 150\text{ }\mu\text{m}$	$\leq \pm 150\text{ }\mu\text{m}$
Limit frequency (–3dB)	1000 Hz	1000 Hz	1000 Hz
Measuring speed	$\leq 20\text{ m/s}$	$\leq 20\text{ m/s}$	$\leq 20\text{ m/s}$
Response time	0.5 ms	0.5 ms	0.5 ms
Temperature coefficient TK in the optimal range	typical 4.7 $\mu\text{m/K}$ min. 1 $\mu\text{m/K}$ max. 7 $\mu\text{m/K}$	4.7 $\mu\text{m/K}$	4.7 $\mu\text{m/K}$
Degree of protection per IEC 60529	IP 67	IP 67	IP 67
Housing material	PA 6	PA 6	PA 6
Material of sensing face	PA 6	PA 6	PA 6
Connection	0.3 m cable with connector	0.3 m cable with connector	3 m cable, PUR
No. of wires × cross-section			3×0.14 mm ²
Approval	cULus	cULus	cULus

Installation note

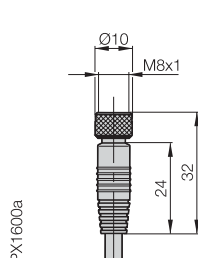
Material	Installation dimension "x"
Steel	0 mm
Brass	5 mm
Aluminum	5 mm
Stainless	5 mm



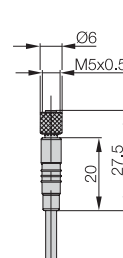
Wiring diagrams



Connector	BKS-B 48	BKS-B 25
Type	straight female	straight female
Application	S 49 sensors	S 26 sensors



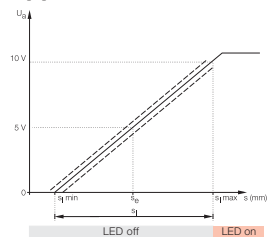
PX1600a



PX1726a

no LED	BKS-B 48-1-PU-03	BKS-B 25-1-PU-03
Cable	molded-on PUR	molded-on PUR
No. of wires × cross-section	3×0.25 mm ²	3×0.14 mm ²
Degree of protection per IEC 60529	IP 67	IP 67

Approach curve



Balluff GmbH
Schurwaldstrasse 9
73765 Neuhausen a.d.F.
Germany
Phone +49 (0) 71 58/1 73-0
Fax +49 (0) 71 58/50 10
E-Mail: balluff@balluff.de
www.balluff.com