

# Ring Sensors

## Inductive Sensors

## Ring Sensors Contents

### Ring Sensors

Balluff's ring sensors can detect small metal objects passing through their active window. They can be used in a variety of automated assembly applications including feed monitors for screws, nails, nuts, bolts, or many other small metal parts. The output of the unit is static, which means that it remains active as long as the metal part is present in the sensing zone.

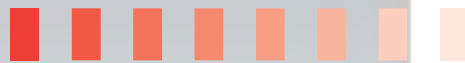
- 1.176** DC 3-/4- Wire 80 x 45 mm
- 1.177** DC 3-/4- Wire 120 x 80 mm, 115 x 80 mm

Stocked, Distributed, and Supported by

# **SENSORS**

## **INCORPORATED**

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 Sensorsincorporated.com



# Inductive

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- Contents
- Selection Charts
- Part Numbers
- Featured
  - GlobalProx®
    - DC 3-Wire
    - DC 2-Wire
  - SteelFace®
    - 2x
    - 3x
    - Fe/NFe
  - Welding
    - Factor 1
    - Weld Field Immune
    - SlagMaster®
    - Welding Accessories

### Standard

- DC 3-/4-Wire Tubular
- DC 3-/4-Wire Block
- AC 2-Wire Tubular
- AC/DC 2-Wire Tubular
- AC/DC 2-Wire Block
- DC 2-Wire Tubular
- DC 2-Wire Block

### Specialty

- SuperShorties™
- Proxinox®
- High Temp
- Analog
- Large Housing
- Ring Sensor**

# 6

Connectors

# 7

Accessories

# O

Product Overview

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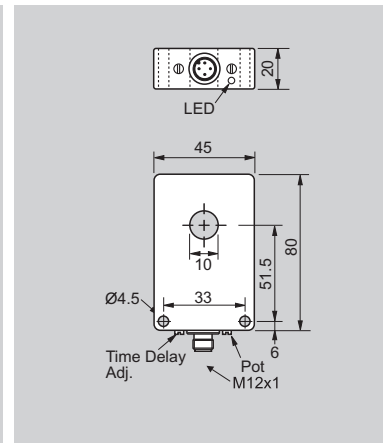
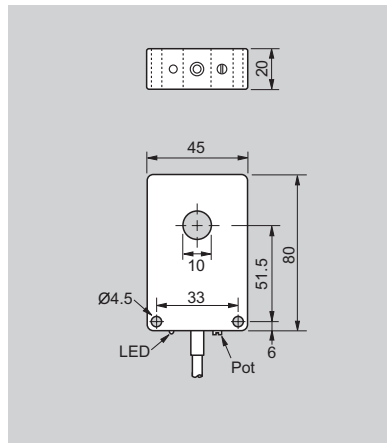
Technical Reference

# p

Part Number Index



Housing Size	<b>80 x 45 mm</b>	<b>80 x 45 mm</b>
Mounting	flush**	flush
Rated Operating Distance $s_n$	$\varnothing$ 10 mm	$\varnothing$ 10 mm

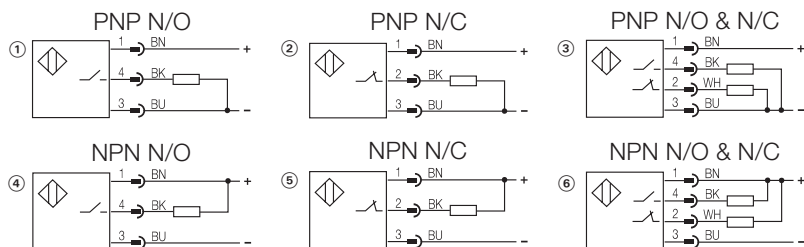


PNP	Normally-open ① Normally-closed ②	BES IKV-K-010-PS-1-Y BES IKV-K-010-PO-1-Y	BES IKV-S4-010-PS-1-Y
NPN	Normally-open ④ Normally-closed ⑤		BES IKV-S4-010-NS-1-Y-TD
Rated Operational Voltage $U_e$		24 Vdc	24 Vdc
Supply Voltage $U_B$		10...30 Vdc	10...30 Vdc
Voltage Drop $U_d$ at $I_e$		$\leq 3.5$ Vdc	$\leq 2.0$ Vdc
Load Current Capacity		$\leq 200$ mA	$\leq 200$ mA
Current Consumption (closed/open)		$\leq 12$ mA	$\leq 12$ mA
Protected against Polarity Reversal		yes	yes
Short Circuit Protected		yes	yes
Repeat Accuracy R		$\leq 5\%$	$\leq 5\%$
Ambient Temperature Range $T_a$		-25... +70°C	-25... +70°C
Operating Frequency f		$\leq 1000$ Hz	4-400 Hz
Function Indication		yes	yes
Degree of Protection per IEC 60529		IP 65	IP 65
Housing Material		plastic	plastic
Material of Sensing Face		plastic	plastic
Connection		cable	connector
No. of Wires x Gauge		3 x 20 AWG	
Recommended Connector			C04 AEL-00-VY-050M

Standard cable length = 2 m PVC  
Other cable lengths and jacket materials may be available. Additional models may also exist. Refer to company website for details.

\*\* Flush mounting is possible when adjusted for minimum sensing distance.

### Wiring Diagrams



# Ring Sensors

## Inductive Sensors

DC 3-/4- Wire Ring Sensors

80 x 45 mm non-flush Ø 25 mm	80 x 45 mm non-flush Ø 25 mm	120 x 80 mm non-flush Ø 45 mm	115 x 80 mm non-flush Ø 45 mm
BES IKV-K-025-PS-1-Y BES IKV-K-025-PO-1-Y	BES IKV-025.23-G-Z-S4	BES IKV-K-045-PS-1-Y BES IKV-K-045-PO-1-Y	BES IKV-045.23-G-Z-S4
BES IKV-K-025-NS-1-Y	BES IKV-S4-025-NS-1-Y-TD	BES IKV-K-045-NS-1-Y	
24 Vdc	24 Vdc	24 Vdc	24 Vdc
10...30 Vdc	10...30 Vdc	10...30 Vdc	18...30 Vdc
≤ 3.5 Vdc	≤ 2.0 Vdc	≤ 3.5 Vdc	≤ 20 Vdc
≤ 200 mA	≤ 200 mA	≤ 400 mA	≤ 200 mA
≤ 12 mA	≤ 12 mA	≤ 12 mA	≤ 12 mA
yes	yes	yes	yes
yes	yes	yes	yes
≤ 5%	≤ 5%	≤ 5%	≤ 5%
-25... +70°C	-25... +70°C	-25... +70°C	-25... +70°C
≤ 1000 Hz	4-400 Hz	≤ 100 Hz	
yes	yes	yes	yes
IP 65	IP 65	IP 65	IP 65
plastic	plastic	plastic	plastic
plastic	plastic	plastic	plastic
cable	connector	cable	connector
3 x 20 AWG		3 x 20 AWG	
	C04 AEL-00-VY-050M		C04 AEL-00-VY-050M



– For mating connectors see section 6.