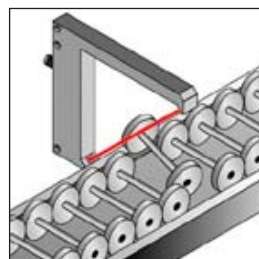
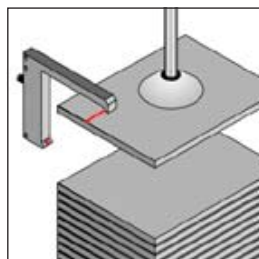
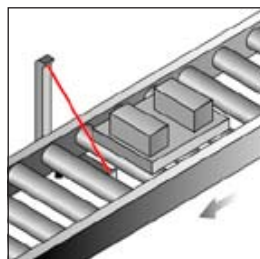
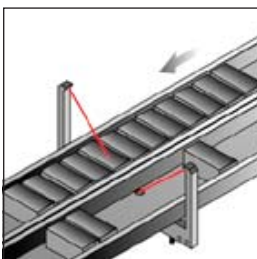
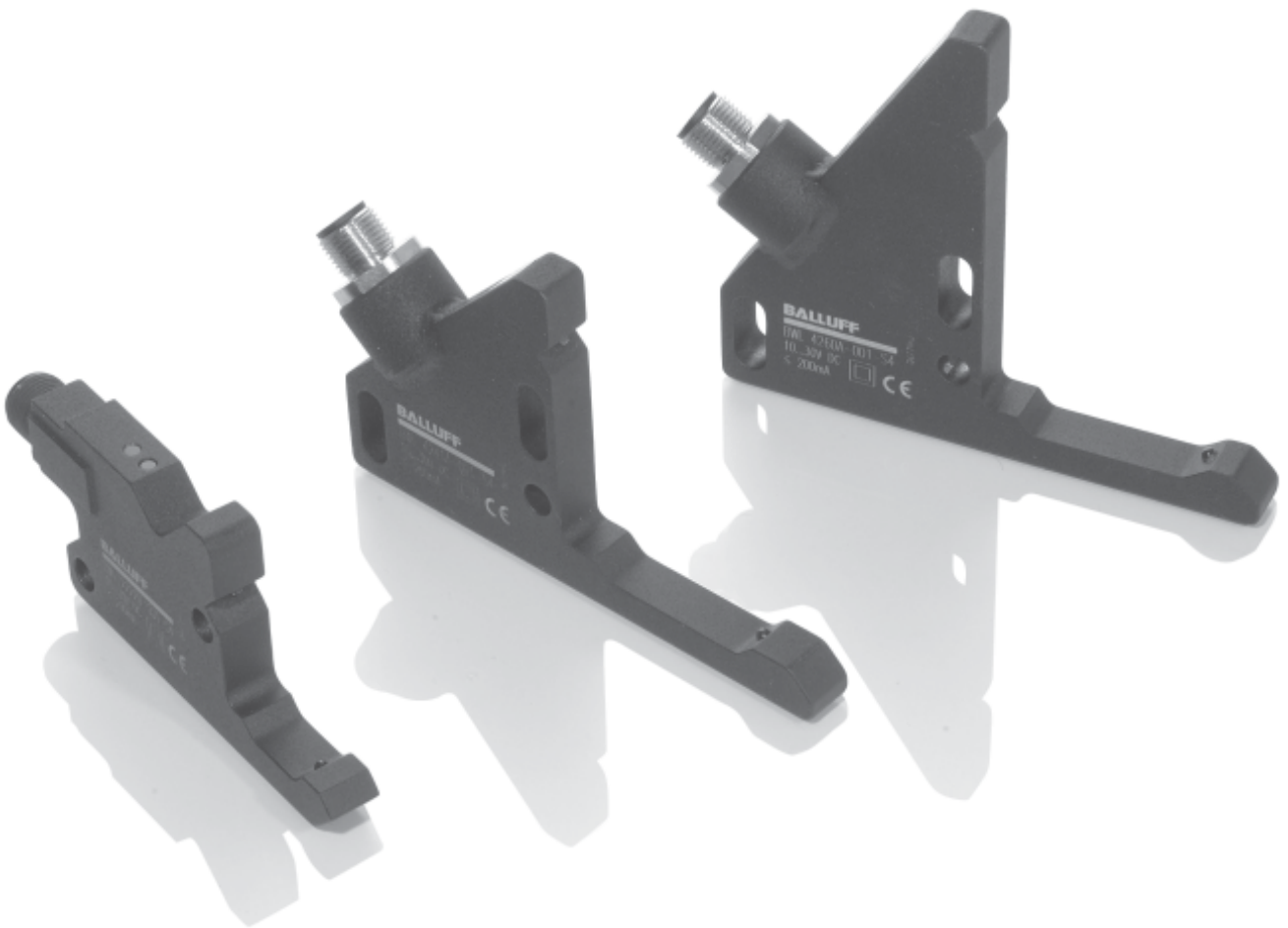



The BWL angle sensor is a powerful through-beam design for harsh industrial use. Its housing is rugged and allows for variable mounting options.

Objects are reliably detected, even under extremely difficult conditions. A powerful infrared emitter ensures high function reserve. This product represents an elegant solution for a variety of applications. Various form factors provide for optimum flexibility.

Applications

- Assembly and handling
- Robotic systems
- Position and location control



Type	Optical axis	Light type	Output	Output function	Switching frequency	U _B	Connection	Page
		Infrared	PNP-Transistor	Dark-on		10...30 V DC	M8 connector, 3-pin M12 connector, 4-pin	
 Angle sensors								
BWL 2222B-001-S4	22/22 mm	■	■	■	1 kHz	■	■	2.2.74
BWL 2222C-001-S4	22/22 mm	■	■	■	1 kHz	■	■	2.2.74
BWL 4241A-001-S4	43/43 mm	■	■	■	1 kHz	■	■	2.2.75
BWL 4241A-001-S49	43/43 mm	■	■	■	1 kHz	■	■	2.2.75
BWL 4260A-001-S4	42/62 mm	■	■	■	1 kHz	■	■	2.2.75
BWL 4260A-001-S49	42/62 mm	■	■	■	1 kHz	■	■	2.2.75

2.2

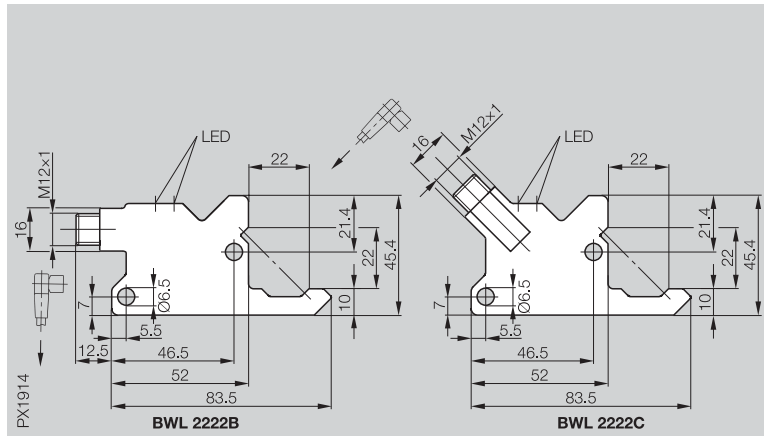
2.3

Photoelectric sensors
accessories
page 2.3.2 ...

6

Connectors
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Series	BWL	BWL
Optical axis	22 mm/22 mm	22 mm/22 mm



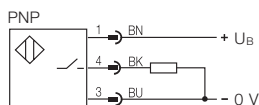
Angle sensor



	BWL 2222B-001-S4	BWL 2222C-001-S4
PNP		
Electrical data		
Supply voltage U_B	10...30 V DC	10...30 V DC
Ripple	15 %	15 %
No-load supply current I_0 max.	≤ 35 mA	≤ 35 mA
Switching output	PNP-Transistor	PNP-Transistor
Output current	≤ 200 mA	≤ 200 mA
Switching type	Dark-on	Dark-on
Voltage drop U_d at I_e	≤ 2.5 V	≤ 2.5 V
Optical data		
Emitter, light type	LED, infrared	LED, infrared
Wavelength	880 nm	880 nm
Time data		
Ready delay	100 ms	100 ms
Response time	≤ 0.5 ms	≤ 0.5 ms
Switching frequency f	1 kHz	1 kHz
Indicator		
Power-on indicator	LED green	LED green
Function ready/error indicator	LED yellow	LED yellow
Mechanical data		
Dimensions	45.4×83.5×10.7 mm	45.4×83.5×10.7 mm
Connection	M12 connector, 4-pin	M12 connector, 4-pin
Housing material	corrosion-resistant steel	corrosion-resistant steel
Optical surface	PMMA	PMMA
Weight	106 g	99 g
Ambient data		
Degree of protection per IEC 60529	IP 67	IP 67
Polarity reversal protected	yes	yes
Short circuit protected	yes	yes
Ambient temperature range T_a	-10...+60 °C	-10...+60 °C
Ambient light rejection	EN 60947-5-2	EN 60947-5-2



Wiring diagram



Angle Sensors

Photoelectric Sensors

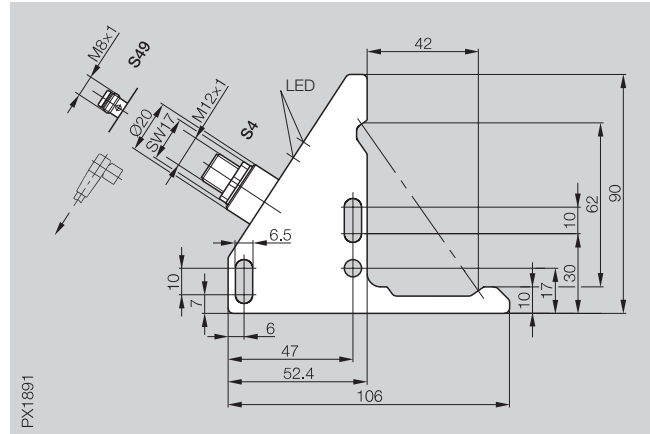
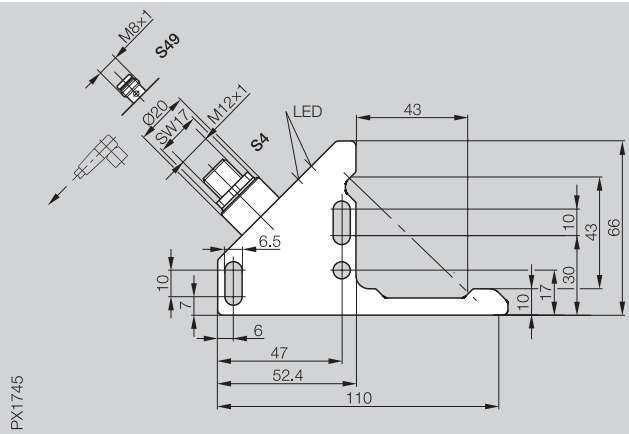
BWL Angle Sensors

BWL
43 mm/43 mm

BWL
43 mm/43 mm

BWL
42 mm/62 mm

BWL
42 mm/62 mm



BWL 4241A-001-S4

BWL 4241A-001-S49

BWL 4260A-001-S4

BWL 4260A-001-S49

10...30 V DC

15 %

≤ 35 mA

PNP-Transistor

≤ 200 mA

Dark-on

≤ 2.5 V

LED, infrared
880 nm

100 ms

≤ 0.5 ms

1 kHz

LED green
LED yellow

66×110×10.7 mm

M12 connector, 4-pin

corrosion-resistant steel

PMMA

148 g

IP 67

yes

yes

-10...+60 °C

EN 60947-5-2

10...30 V DC

15 %

≤ 35 mA

PNP-Transistor

≤ 200 mA

Dark-on

≤ 2.5 V

LED, infrared
880 nm

100 ms

≤ 0.5 ms

1 kHz

LED green
LED yellow

66×110×10.7 mm

M8 connector, 3-pin

corrosion-resistant steel

PMMA

124 g

IP 67

yes

yes

-10...+60 °C

EN 60947-5-2

10...30 V DC

15 %

≤ 35 mA

PNP-Transistor

≤ 200 mA

Dark-on

≤ 2.5 V

LED, infrared
880 nm

100 ms

≤ 0.5 ms

1 kHz

LED green
LED yellow

90×106×10.7 mm

M12 connector, 4-pin

corrosion-resistant steel

PMMA

181 g

IP 67

yes

yes

-10...+60 °C

EN 60947-5-2

10...30 V DC

15 %

≤ 35 mA

PNP-Transistor

≤ 200 mA

Dark-on

≤ 2.5 V

LED, infrared
880 nm

100 ms

≤ 0.5 ms

1 kHz

LED green
LED yellow

90×106×10.7 mm

M8 connector, 3-pin

corrosion-resistant steel

PMMA

155 g

IP 67

yes

yes

-10...+60 °C

EN 60947-5-2

Recommended accessories

please order separately

Connector
BKS-_ 19/BKS-_ 20



Connector
BKS-_ 48/BKS-_ 49



2.2

2.3

Photoelectric sensors
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