

Dynamic optical windows are a type of slot sensor. Instead of one light beam as used in the other slot sensors, dynamic optical windows use an array of parallel light beams. This arrangement makes it possible to sense objects not just at a point, but over a range (window).

A special optical arrangement ensures consistently high resolution at each place in the window.

The BOWA sensors are dynamic, which means that parts are detected in the active area when they are moving.


Features

- High resolution across the entire area
- Dynamic operation
- Only moving objects are detected, so feed trays etc. do not affect the measurement
- Detects small parts down to 0.8 mm
- Adjustable output signal duration
- Adjustable sensitivity
- Three window sizes
- Standard M8 connector

Applications

- Compressed air feeding of small parts
- Thread break monitoring
- Eject monitoring
- Counting/separating parts



Type	Active area	Resolution	Light type	Output	Output function	Principle	U _B	Connection	Page
 Dynamic optical windows			Infrared	PNP-Transistor	Dark-on	Dynamic	10...30 V DC	M8 connector, 3-pin	
BOWA 0408-PS-C-S49	40x80 mm	0.8 mm	■	■	■	■	■	■	2.2.78
BOWA 0808-PS-C-S49	80x80 mm	1 mm	■	■	■	■	■	■	2.2.79
BOWA 1208-PS-C-S49	120x80 mm	1.5 mm	■	■	■	■	■	■	2.2.79

2.2

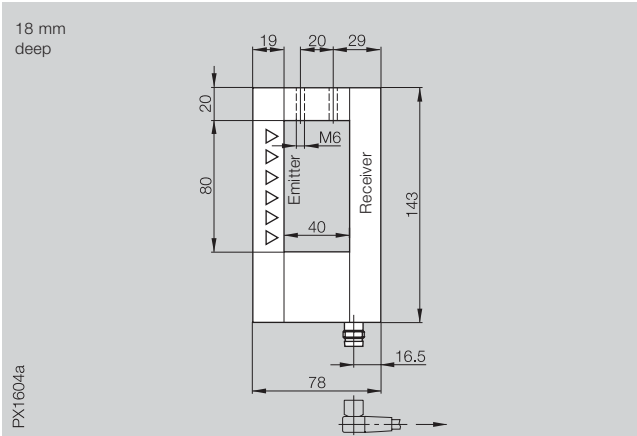
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Series	BOWA
Active area	40×80 mm



Dynamic optical window

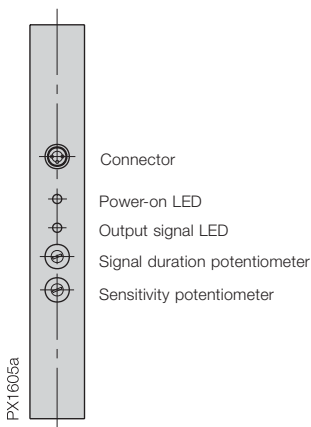
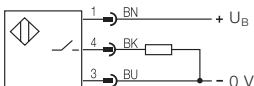


PNP	BOWA 0408-PS-C-S49
Electrical data	
Supply voltage U_B	10...30 V DC
Ripple	10 %
No-load supply current I_0 max.	≤ 85 mA
Switching output	PNP-Transistor
Switching type	Dark-on
Output current	200 mA
Voltage drop U_d at I_e	≤ 3.5 V
Settings	2× potentiometers 270°
Optical data	
Emitter, light type	LED, infrared
Wavelength	880 nm
Resolution (smallest discernible part)	0.8 mm
Time data	
Ready delay	≤ 100 ms
Turn-on delay	0.2 ms
Signal duration	10...300 ms adjustable
Switching frequency f	3...100 Hz
Indicator	
Power-on indicator	LED green
Output function indicator	LED red
Mechanical data	
Dimensions	143×78×18 mm
Connection	M8 connector, 3-pin
Housing material	Al anodized
Optical surface	PMMA
Weight	280 g
Ambient data	
Degree of protection per IEC 60529	IP 65
Polarity reversal protected	yes
Short circuit protected	yes
Ambient temperature range T_a	-10...+55 °C
Ambient light rejection per	EN 60947-5-2

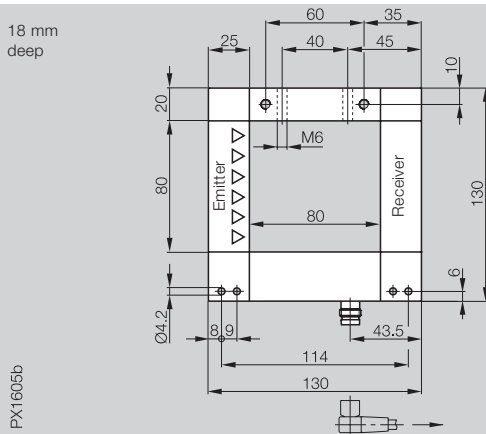


Note when accounting for ambient light:
The receiver is located on the connector side.

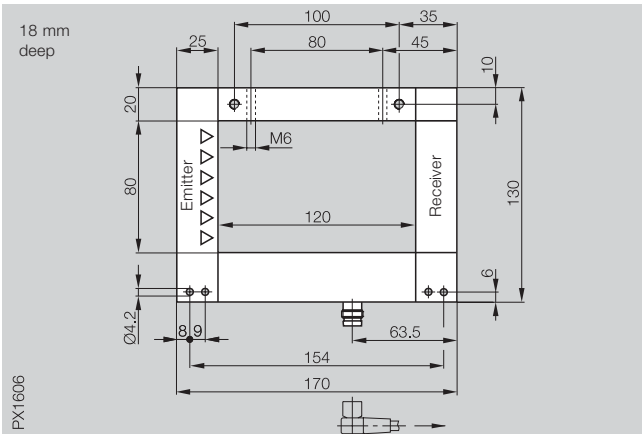
Wiring diagram



**BOWA
80×80 mm**



**BOWA
120×80 mm**



BOWA 0808-PS-C-S49

BOWA 1208-PS-C-S49

10...30 V DC

10 %

≤ 125 mA

PNP-Transistor

Dark-on

200 mA

≤ 3.5 V

2× potentiometers 270°

LED, infrared

880 nm

1 mm

≤ 100 ms

0.2 ms

10...300 ms adjustable

3...100 Hz

LED green

LED red

130×130×18 mm

M8 connector, 3-pin

Al anodized

PMMA

400 g

IP 65

yes

yes

-10...+55 °C

EN 60947-5-2

10...30 V DC

10 %

≤ 150 mA

PNP-Transistor

Dark-on

200 mA

≤ 3.5 V

2× potentiometers 270°

LED, infrared

880 nm

1.5 mm

≤ 100 ms

0.2 ms

10...300 ms adjustable

3...100 Hz

LED green

LED red

130×170×18 mm

M8 connector, 3-pin

Al anodized

PMMA

480 g

IP 65

yes

yes

-10...+55 °C

EN 60947-5-2

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Recommended accessories

please order separately

Connector
BKS-_ 48/BKS-_ 49



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