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EdgeMaster™ Series

For precise detection of moving objects or webs



EdgeMaster™

Accurate web and edge position feedback

Production problems that need solutions

Skew, material shifting, and drag can be caused by a number of machine related issues. Tighter control of moving surfaces will result in higher production speeds on your equipment and lead to a reduction in material waste, thus improving your bottom line.

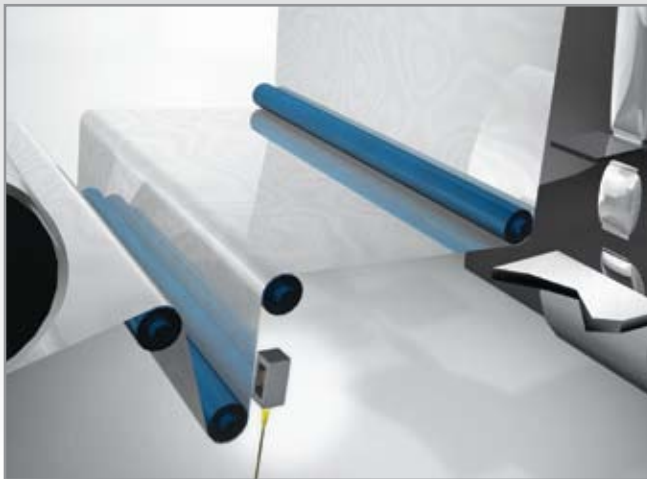
Traditional solutions have relied on mechanical devices, which are difficult to maintain and limit your design flexibility due to specific implementation constraints.

Discrete Edge Detection

Dual outputs
device maintains
edge tracking



BAV MA



Analog Array Edge Position

Absolute position
information based
on how far an
object enters the
slot



BGL C Series



EdgeMaster™

Accurate web and edge position feedback

Innovation to match your application

EdgeMaster™ sensors are designed to work with a variety of materials, making them a reliable solution for many problems.

Based on the latest in photoelectric sensing technology, they provide:

- **Precise position feedback**
- **High speed edge detection**
- **Design flexibility and installation versatility**

Analog Line Edge Position

Absolute position information based on percentage of reflective line tape covered by an object



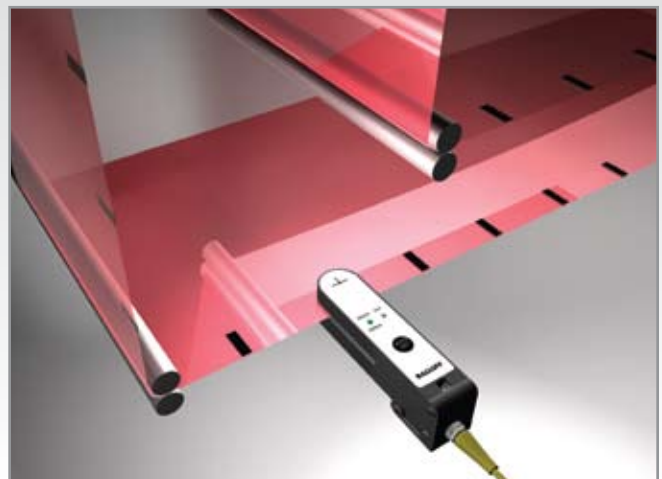
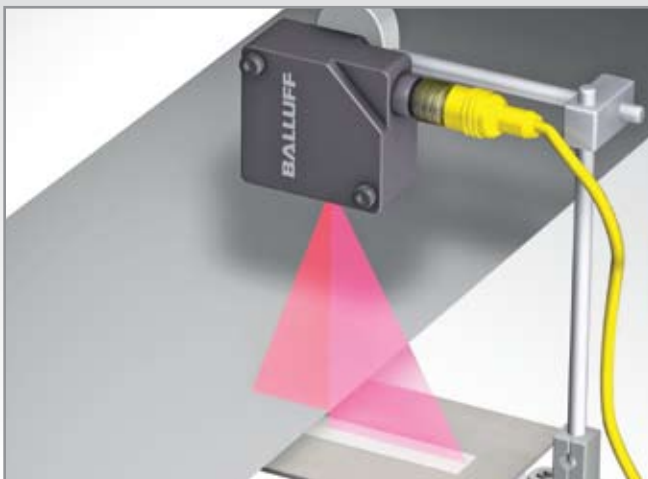
Discrete Registration Mark Detection

Outputs are taught specific color registration marks for tracking and cutting



BOL 27K

BGL 21



EdgeMaster™

BAV MA edge detection sensor



Ordering code	Part number	Outputs
BAV0001	BAV MA-OD-000001-01	PNP x2
BAV0002	BAV MA-OD-000001-02	NPN x2

General Specifications

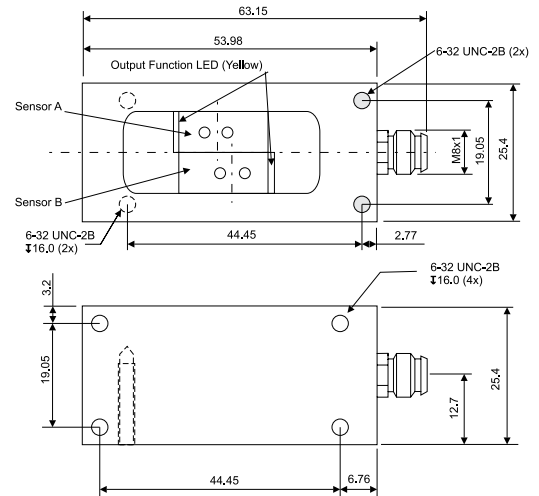
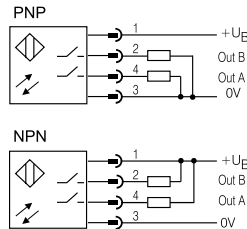
Supply voltage	10...30 Vdc
Max. load current	50 mA
Short circuit protection	yes
Current overload protection	yes
Polarity reversal protection	yes
Degree of protection	IP 67
Temperature rating	-20 to +50 °C
Switching frequency	800 Hz
Light source	660 nm (red light)
Maximum sensing range	15 mm
Connection	M8 4-pole connector
Recommended cable	BCC0543

Featuring an innovative dual-sensing design, the BAV MA Edge Detection sensor offers you two independent discrete outputs in a compact package for excellent discrete, offset detection.

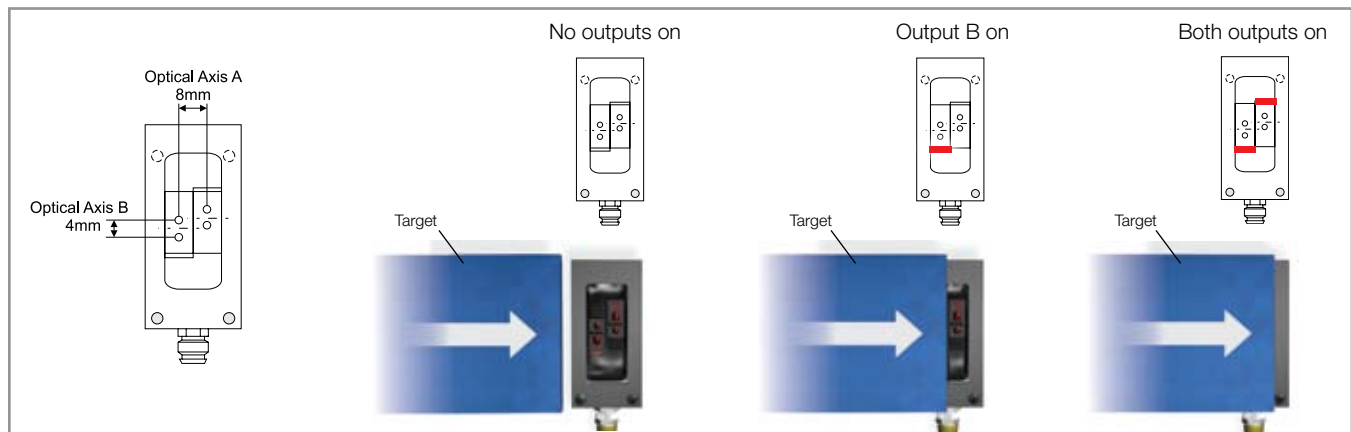
A web or object can pass horizontally or vertically over the first sensing element to activate output 1, then an additional offset distance to activate output 2.

The BAV MA is ideal for:

- Films
- Labels
- Transparents



Using the BAV MA for edge tracking



EdgeMaster™

BGL C edge position sensor



For applications that require exact position measurement, the BGL C series is your best choice. With its standard 30 or 50 mm sensing window and 28 mm of measuring area, thick or thin objects or webs can be tracked to a resolution of 0.08 mm.

Models include dual-discrete outputs, one discrete output plus one analog output (either 0-10 V or 4-20 mA) or IO-Link communications.

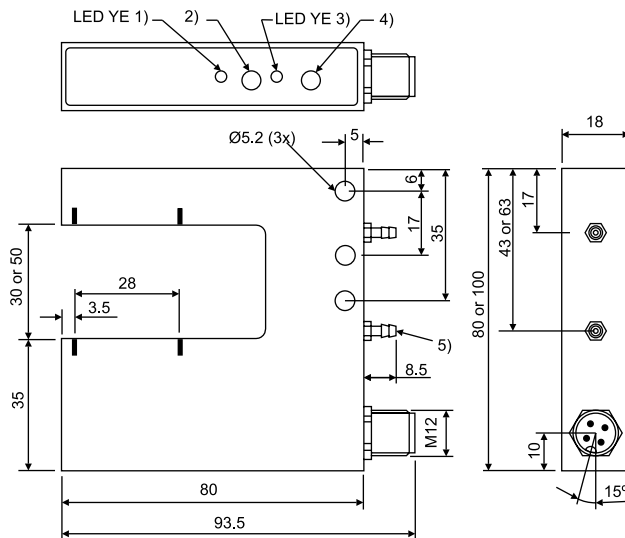
Ordering code	Part Number	Gap Width	Outputs
BGL002Z	BGL 30C-001-S4	30 mm	PNP x2*
BGL0030	BGL 30C-002-S4	30 mm	NPN x2*
BGL0031	BGL 30C-003-S4	30 mm	PNP x1* and 4-20 mA
BGL0032	BGL 30C-004-S4	30 mm	NPN x1* and 4-20 mA
BGL0033	BGL 30C-005-S4	30 mm	PNP x1* and 0-10 V
BGL0034	BGL 30C-006-S4	30 mm	NPN x1* and 0-10 V
BGL0035	BGL 30C-007-S4	30 mm	IO-Link
BGL0037	BGL 50C-001-S4	50 mm	PNP x2*
BGL0038	BGL 50C-002-S4	50 mm	NPN x2*
BGL0039	BGL 50C-003-S4	50 mm	PNP x1* and 4-20 mA
BGL003A	BGL 50C-004-S4	50 mm	NPN x1* and 4-20 mA
BGL003C	BGL 50C-005-S4	50 mm	PNP x1* and 0-10 V
BGL003E	BGL 50C-006-S4	50 mm	NPN x1* and 0-10 V
BGL003F	BGL 50C-007-S4	50 mm	IO-Link

*Note: The outputs of the sensor can be toggled between NO and NC.

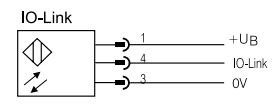
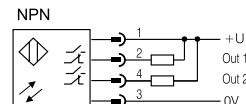
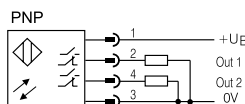
General Specifications

Supply voltage	10...30 Vdc
Max. load current	100 mA
Short circuit protection	yes
Current overload protection	yes
Polarity reversal protection	yes
Degree of protection	IP 67
Temperature rating	-5 to +55 °C
Switching frequency	500 Hz
Light source	633 nm (red light)
Maximum resolution	0.08 mm
Connection	M12 4-pole connector
Recommended cable	BCC02N6 (non-IO-Link) BCC039P (IO-Link)

Web position monitoring



- 1) Q1 active/error 2) Q1: recvr., light/dark 3) Q2: recvr. active/error
4) Q2: recvr., Light/dark 5) Optinal Pneumatic connection PK-3





Precise feedback for larger targets often requires a sensor with a longer sensing range. The BOL 27K provides up to 150 mm of measuring distance with the sensor mounted 200 mm away from the reflective tape provided with the sensor, and is able to detect changes as small as 0.15 mm.

Operating modes:

- **Edge mode**
monitors leading edge position
- **Center mode**
monitors edge position relative to a centerline
- **Width mode**
measures width of a target
- **Area mode**
detects relative reflectivity

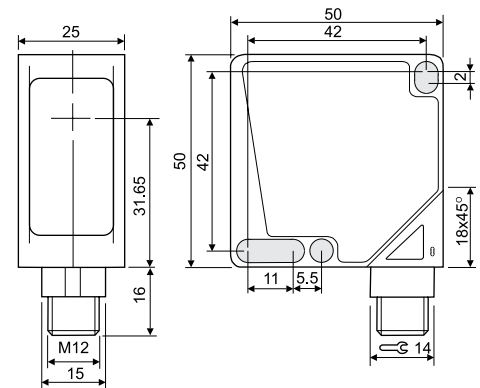
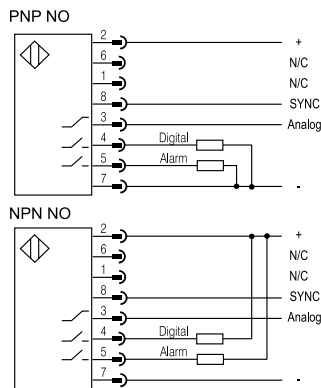
Includes reflective tape

Ordering code	Part number	Outputs
BOL0002	BOL 27K-PS-L01-S115	PNP x2* and 4-20 mA
BOL0001	BOL 27K-NS-L01-S115	NPN x2* and 4-20 mA

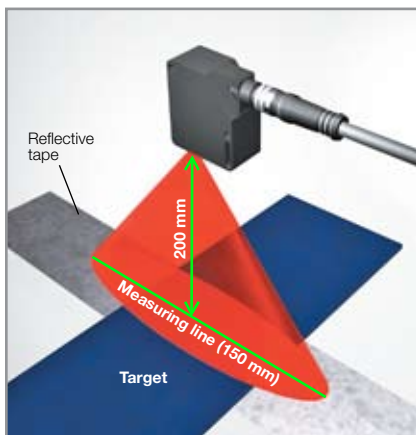
*Note: The outputs of the sensor can be toggled between NO and NC.

General Specifications

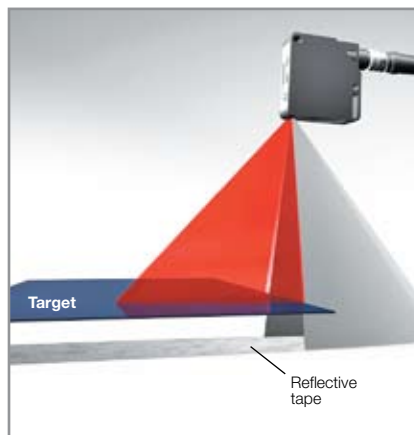
Supply voltage	10...30 Vdc
Max. load current	70 mA
Short circuit protection	yes
Current overload protection	yes
Polarity reversal protection	yes
Degree of protection	IP 67
Temperature rating	-10 to +55 °C
Switching frequency	130 Hz
Light source	875 nm (infrared light)
Minimum target size	0.9 mm
Maximum resolution	0.15 mm
Connection	M12 8-pole connector
Recommended cable	BCC01F5



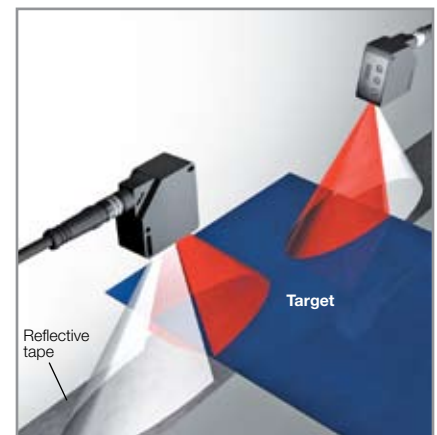
Target and reflective tape



Edge mode



Width measurement





Designed specifically to keep up with high-speed automated machinery of all kinds, the BGL 21 is the best solution for difficult contrast applications.

It features:

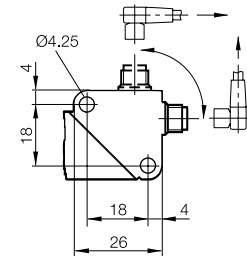
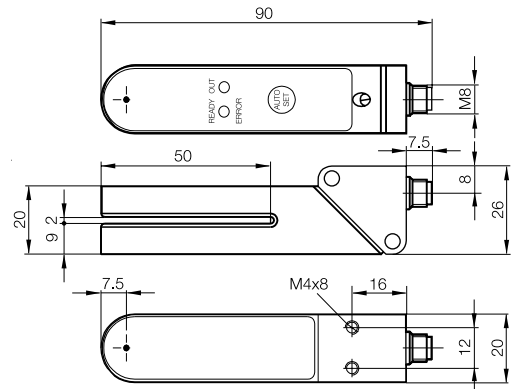
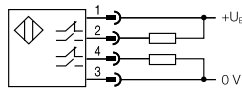
- **EEPROM memory**
- **Single pushbutton programming**
- **Fast switching frequency**
- **2 mm sensing gap**

Ordering code	Part number	Outputs	Application
BGL002L	BGL 21-IR	PNP x1 and NPN x1*	Hole/Label detection on continuing surfaces
BGL002M	BGL 21-RG	PNP x1 and NPN x1*	Registration mark detection

*Note: The outputs of the sensor can be toggled between NO and NC.

General Specifications

Supply voltage	10...30 Vdc
Max. load current	100 mA
Short circuit protection	yes
Current overload protection	yes
Polarity reversal protection	yes
Degree of protection	IP 67
Temperature rating	-20 to +60 °C
Switching frequency	25 kHz
Light source	635 nm/535 nm (RG version) 880 nm (IR version)
Connection	M8 4-pole connector
Recommended cable	BCC0543



High speed label detection



Registration mark detection on a film



Accessories

Standard Connectivity	BMS Mounting Accessories	Power Supplies
<ul style="list-style-type: none"> – Standard M8 and M12 cordsets, 3-wire & 4-wire, PVC, PUR & TPE – Standard DIN connectors – Multiple interface blocks 	<ul style="list-style-type: none"> – Exact positioning – Accommodate a variety sensor applications – Attach to base plates or all common extrusion rails 	<ul style="list-style-type: none"> – Ultra reliable – Protect against unforeseen events – Clean, accurate power for the most demanding equipment
www.balluff.com/connectivity	www.balluff.com/bms	www.balluff.com/powersupply



Other product families from Balluff



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