

## Optical slot sensors



### C-GAGE™ SLC1 series self-adaptive label sensor

**Technology** capacitive sensor using patented Adaptive Digital Logic (ADL)

**Adjustment** no user adjustments; automatic continuous adjustment of sensing threshold and drift compensation

**Adjustment interval** every 250 ms or 4 labels

**Registration accuracy\*** 0,3 mm typical, at web speed up to 1,5 m/s

**Maximum counting speed\*** web speed of 61 m/s  
**Minimum sensing speed\*** web speed of 90 mm/min.

**Minimum gap between labels** 3 mm

**Supply**  
 Supply voltage 10...30 V dc  
 Ripple  $V_{pp}$   $\leq 10\%$   
 No load current  $< 60\text{ mA}$

**Protection**  
 reverse polarity  
 continuous overload  
 transient voltages  
 short-circuit

**Output**  
 Continuous load current  $\leq 150\text{ mA}$   
 Overload trip point  $> 200\text{ mA}$  at 20 °C

**Material**  
 Housing machined aluminium with black anodised finish  
 Protection class IP67  
 (IEC 60529/EN 60529)

Temperature range  $+ 5...+ 50\text{ }^{\circ}\text{C}$   
 Cable 2 m, PVC,  $5 \times 0,34\text{ mm}^2$   
 Connector *eurocon* (M12 x 1)

**Indicator LED's**  
 Green power-on  
 Green flashing output overload  
 Yellow npn and pnp outputs are ON  
 Green/Yellow alternating flashing internal error, reset sensor

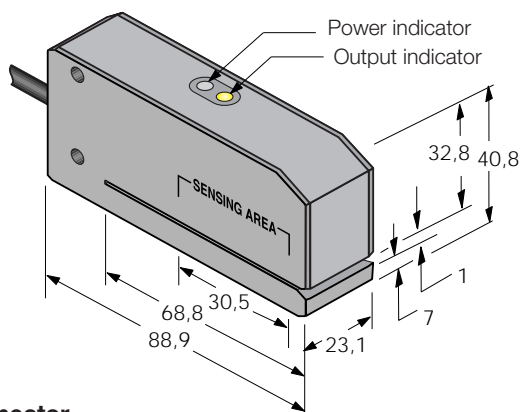
### Accessories

**Connectors**  
 WAK4.5-2/P00 80 085 76 straight type  
 WWAK4.5-2/P00 80 085 83 right-angled type

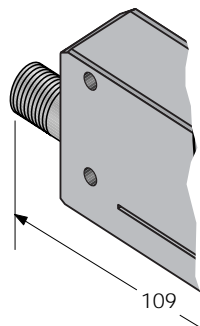
\* based on 3,2 mm gap between labels

### Dimensions [mm]

#### ● Cable

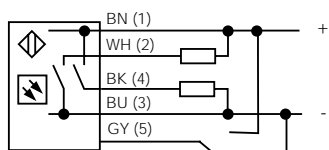


#### ● Connector

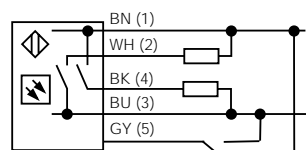


### Wiring

Outputs ON during gap



Outputs ON during label



Toggle to opposite polarity for  $> 100\text{ ms}$  to reset microprocessor

## C-GAGE™ SLC1 series self-adaptive label sensor

	<i>Output function</i>	<i>Connection</i>	<i>Type</i>	<i>Ident number</i>
	pnp, npn pnp, npn	cable connector	<b>SLC1BB6</b> <b>SLC1BB6Q</b>	30 561 77 30 561 78

### SLC1 Series Description

The SLC1 Series Label Sensor was developed to provide trouble-free detection of labels on web backing material. It reliably senses the difference between materials of extremely low visual contrast, including clear labels on clear or opaque backing. The SLC1 uses Banner's exclusive Adaptive Digital Logic (ADL) to automatically make all sensor settings; no user adjustments are necessary.

### SLC1 Series Operation

The SLC1 Series is completely self-teaching and needs no programming; there are no adjustments to set. Simply align the label web in the slot, between the guides, and allow the labels to run through the sensor. After the passing of four successive labels or 250 milliseconds (whichever is greater), the SLC1 will learn the characteristics of the labels, and adjust for the proper sensing threshold and drift compensation.

### Reset Procedure

Resets are performed at startup, when changing label types, or in response to an internal error indication. Internal errors are caused by several factors:

- moisture in the sensing slot
- extreme and prolonged web flutter
- label jams (labels touching both the top and the bottom sensor forks).

To reset, simply turn the power to the SLC1 ON or cycle the power OFF for 1 second or longer and ON again. The SLC1 may also be reset using the sensor's grey wire. To do so, toggle the grey wire to the opposite polarity for > 100 ms. Again, the sensor will automatically adjust to the current sensing conditions after the passing of four labels or 250 ms, whichever is greater.

NOTE: Labels with metallic inks, foil embossing or metal substrates are not recommended for use with SLC1 Series sensors.