Optical slot sensors

SLE10/SLE30 Expert™ series
TEACH-mode slot sensors

Wave length
Red 680 nm

Adjustment
sensitivity
light/dark operate

Supply
Supply voltage 10...30 V dc
Ripple \( V_{PP} \) \( \leq 10 \% \)
No load current \( \leq 45 \) mA

Protection
reverse polarity
overload
short-circuit
transient voltages

Output
Continuous load current \( \leq 150 \) mA
Switching frequency \( \leq 1 \) kHz
\( \leq 3,3 \) kHz (SLE...Y)

Material
Housing ABS/polycarbonate
Lens acrylic
Protection class IP67

Temperature range -20...+70 °C

Cable 2 m, PVC, 5 x 0,5 mm²

Connector
eurocon (M12 x 1)

Indicator LED's
Green power-on
Green flashing output marginal
Yellow (RUN-mode) output state
Yellow (static TEACH-mode) teach ON or OFF condition
Yellow flashing (dynamic TEACH-mode) ready for dynamic teach
Red signal strength

Accessories
Bracket
SMBSL 30 583 35 angled bracket

Connectors
WAK4,5-2/P00 80 085 76 straight type
WWAK4,5-2/P00 80 085 83 right-angled type
**Static and Dynamic Teach features**

Setting the sensitivity of the SLE... sensor is performed in Teach mode. The sensor offers two methods for programming: Static Teach and Dynamic Teach. Use the built-in push button or the remote teach input for either method.

**Static Teach**

The sensitivity is automatically set when the sensor is taught the ON and OFF conditions. (The first condition taught is the ON condition.) Press and hold the push button for minimum 2 seconds to enter Teach mode. Then, when the push button is clicked, the sensor will sample each sensing condition and register this into its memory. After the second sensing condition is registered, the SLE... Expert automatically sets the sensitivity to the optimum value for the application, and then returns to RUN mode. If sensing contrast is not acceptable, the sensor will return to the beginning of Teach mode.

**Dynamic Teach**

This is a method of setting the sensor’s sensitivity while the object to be sensed is in motion. When detecting small parts, aligning the objects to the sensor’s effective beam can be difficult with the Static Teach method. In this case, Dynamic Teach will allow you to pass individual or multiple parts through the beam; the sensor will detect them and set the sensitivity automatically.

When detecting labels, web flutter may change the amount of light passing through the label and its backing material. Dynamic Teach will sense this variation and adjust the sensitivity accordingly. Dynamic Teach is activated after accessing Teach mode (press and hold the push button for a minimum of 2 seconds), and then double-click the push button. While the object to be sensed is in motion, push in and hold the button. As long as the button is held, the sampling will continue. Upon release of the button, the sensor chooses the optimum setting for the application and returns to RUN mode. If sensing contrast is not acceptable, the sensor will return to Static Teach mode; double click the push button to initiate Dynamic Teach.

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**Optical slot sensors**

<table>
<thead>
<tr>
<th>Spec.</th>
<th>Slot width</th>
<th>Light source</th>
<th>Output function</th>
<th>Connector</th>
<th>Type</th>
<th>Ident number</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>10 mm red</td>
<td>pnp, pnp</td>
<td>cable</td>
<td></td>
<td>SLE10B6V</td>
<td>30 603 80</td>
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<tr>
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<td>connector</td>
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</tr>
</tbody>
</table>

* Typical excess gain: indication of the sensitivity of the sensor. A minimum value of 1 is required to switch the sensor on.