

**GK 14**

**Capacitive forked sensor**

en 08-2014/05 50110462-01



**1mm**



- Forked sensor for reliable detection of transparent and opaque labels
- PNP and NPN transistor output for optimum adaptation to the controller
- Robust metal housing with beveled inlet edges
- Inverting input for easy adaptation of the output signal level



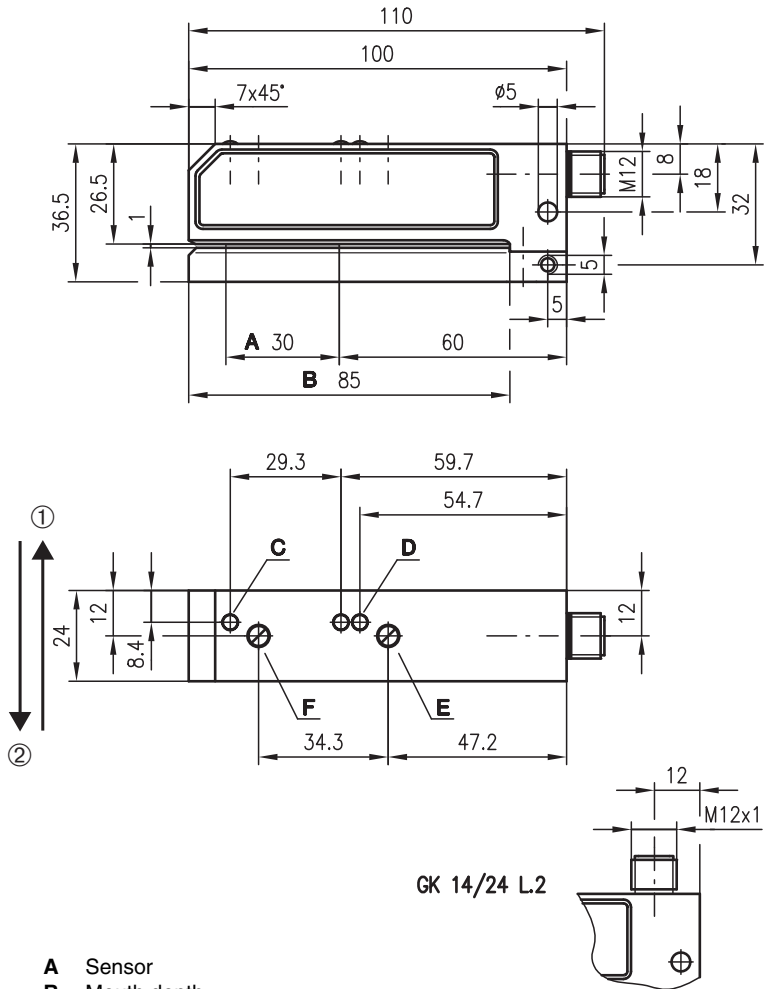
We reserve the right to make changes • DS\_GK14\_en\_50110462\_01.fm

**Accessories:**

(available separately)

- M12 connectors (KD ...)
- Ready-made M12 cables (K-D...)

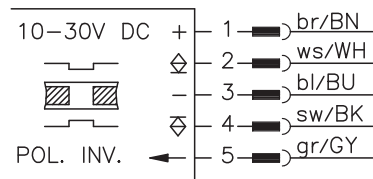
**Dimensioned drawing**



- A** Sensor
- B** Mouth depth
- C** Display switching output
- D** Display base adjustment
- E** Base adjustment
- F** Sensitivity adjustment:  
Clockwise rotation = increase sensitivity

① + ② Direction of label-tape movement

**Electrical connection**



## Specifications

<b>Optical data</b>	
Mouth width	0.9mm ± 0.1 mm
Mouth depth	85mm
<b>Timing</b>	
Switching frequency <sup>1)</sup>	5000Hz
Response time	0.1ms
Delay before start-up	≤ 100ms
<b>Electrical data</b>	
Operating voltage U <sub>B</sub>	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U <sub>B</sub>
Open-circuit current	≤ 35mA
Switching output	1 PNP transistor output 1 NPN transistor output
Function characteristics	direction dependent, reversible
Signal voltage high/low	≥ (U <sub>B</sub> -2V)/≤ 2V
Output current	200mA
Sensitivity	adjustable with multiturn potentiometer
Base adjustment	adjustable with multiturn potentiometer
<b>Indicators</b>	
Yellow LED	label/gap
LED yellow (2x)	base adjustment
<b>Mechanical data</b>	
Housing	aluminum, anodized
Weight	175g
Connection type	M12 connector, 5-pin
<b>Environmental data</b>	
Ambient temp. (operation/storage)	0°C ... +60°C
Protective circuit <sup>2)</sup>	1, 2
VDE safety class	III
Protection class	IP 65
<b>Options</b>	
Inverting input high/low	≥ 8V/≤ 2V
Input resistance	10kΩ

1) Max. label speed 10m/s, min. label gap 2mm

2) 1=polarity reversal protection, 2=short-circuit protection for all outputs

## Remarks

- **Switching behavior dependent on the infeed direction**  
Depending on the direction of movement of the label tape through the sensor, the following switching behavior occurs at the outputs:

Direction of movement	Switching outputs pin 2 + pin 4	
	Pin 5 not connected or 0V	Operating voltage U <sub>B</sub> at pin 5
①	Signal in the gap	Signal on the label
②	Signal on the label	Signal in the gap

- **Mounting**  
For optimum function of the capacitive forked sensor, the sensor should be mounted on a metallic machine part. A lock washer (e.g DIN 6797) should be placed under the screw head to secure the sensor.

## Order guide

	Designation	Part No.
Rear connector	GK 14/24 L	50026371
Top connector	GK 14/24 L.2	50031714

## Tables

## Diagrams

## Remarks

### Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

- **Base setting**
  - Set sensitivity to max. (turn potentiometer to the right), then turn back 1/2 turn to the left.
  - Base adjustment without label tape such that both LEDs are equally bright.
  - If necessary, reduce the sensitivity setting (in steps of 1/4 turn to the left).
- **Base adjustment**  
Perform after new mounting, cleaning, sensitivity increase.
- **Switching behavior**  
A signal change at the switching output occurs when a label enters at the minimum speed. The output signal remains constant until the next edge of an exiting or entering label is detected.