

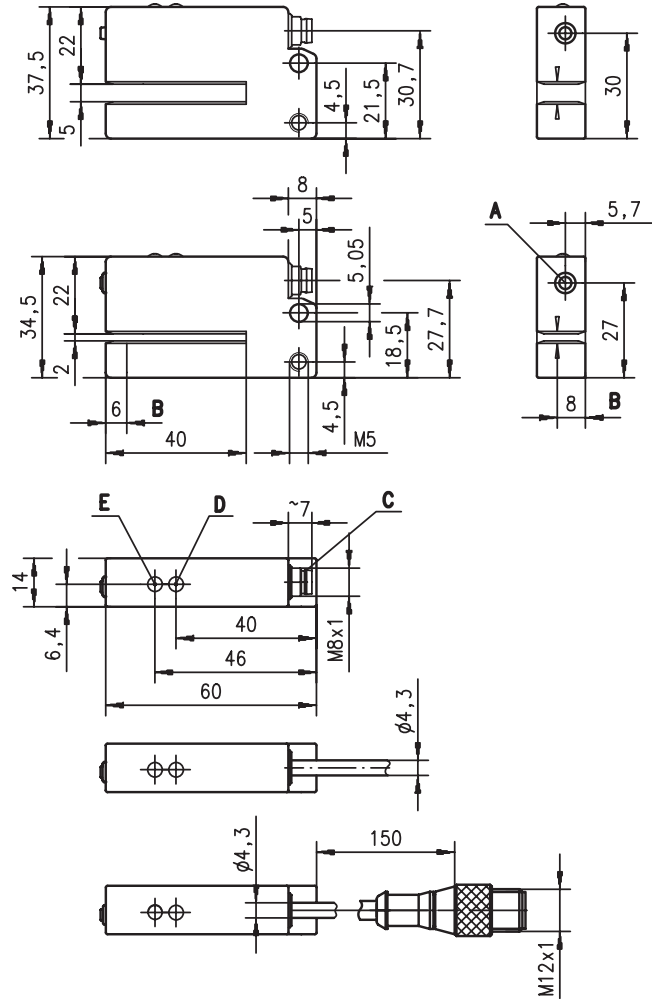


GS 06

Forked photoelectric sensor



Dimensioned drawing



- A Teach-in button or potentiometer
- B Optical axis
- C Connector M8x1
- D Indicator diode ready/teach-in (green)
- E Indicator diode switching output/teach-in (yellow)

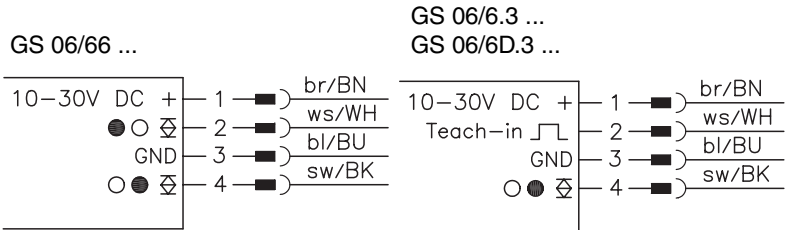


2mm  
5mm



- Forked photoelectric sensor for precise detection of labels on stock material
- Easy and reliable setting via teach-in button (two-value teach-in)
- Setting to bearer/label gap or during operation
- Robust metal housing with bevelled inlet edges
- Mounting holes for fast installation
- M8 connector, cable with M12 connector or cable for individual connection
- Protected against ambient light through light modulation
- Push-Pull switching outputs

Electrical Connection



Accessories:

- Ready-made cables (KB ...)



We reserve the right to make changes \* gs\_a36e.fm



## Specifications

### Optical data

Mouth width 2mm or 5mm (see table)

### Timing

Switching frequency 8000Hz  
Response time 0.0625ms  
Delay before start-up  $\leq 100$  ms

### Electrical data

Operating voltage  $U_B$  10 ... 30VDC (incl. residual ripple)  
Residual ripple  $\leq 15\%$  of  $U_B$   
Bias current  $\leq 40$  mA  
Switching output <sup>1)</sup> see table  
Signal voltage high/low  $\geq (U_B - 2V) \leq 2V$   
Output current 100 mA  
Sensitivity may be set via teach-in button, Teach-in button or potentiometer (see table)

### Indicators

LED yellow light path free/switching point in the label gap  
LED green ready

### Mechanical data

Housing diecast zinc  
Weight see order guide  
Connection type M8 connector or cable 150mm with M12 connector or cable 360mm or cable 2000mm (see order guide)

### Environmental data

Ambient temp. (operation/storage)  $-20^\circ\text{C}$  ...  $+60^\circ\text{C}$  /  $-30^\circ\text{C}$  ...  $+70^\circ\text{C}$   
Protective circuit <sup>2)</sup> 1, 2  
VDE safety class III  
Protection class IP 65

### Teach-in input

Active/not active  $\geq 8V \leq 2V$   
Activation/disable delay  $\leq 0.2$  ms  
Input resistance 10k $\Omega$

- 1) The push-pull switching outputs must not be connected in parallel  
2) 1=polarity reversal protection, 2=short-circuit protection for all outputs

## Tables

## Diagrams

## Order guide

see table on page 4!

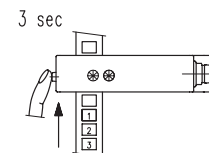
## Note

- To achieve a proper operation, an electric connection between sensor and machine earth must be ensured.
- The sensor ships with the standard switching hysteresis.
- For the detection of slightly transparent labels, the minimum switching hysteresis may be used.

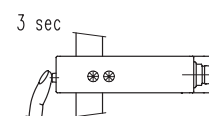
**GS 06**
**Teaching during operation, teaching for bearer and label (dynamic teach)**

The sensor can be taught while the plant is running. The plant should be operated at commissioning speed.

	Operation	LED green	LED yellow	Sensor
1.	Insert the label tape into the forked sensor	On	On/Off	
2.	Press teach button for 3s	Off → On	On/Off	Acknowledgement button press
3.		flash simultaneously		
4.	Release teach button	flash alternatingly		Teach process has been started
5.	Transport the label tape so that 3 ... 5 label gaps pass the sensor.	flash alternatingly		The difference between the label and the bearer material is measured
6.	Briefly press teach button	On → Off	On/Off	Optimal values of the material have been saved
7.	Sensor is in operating mode	On	On/Off	Switching threshold has been saved


**Teaching for bearer if the label tape cannot be transported (static Teach)**

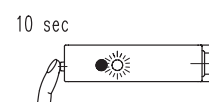
	Operation	LED green	LED yellow	Sensor
1.	Insert label tape with empty bearer material or with gap	On	On/Off	
2.	Press teach button for 3s	Off → On	On/Off	Acknowledgement button press
3.		flash simultaneously		
4.	Release teach button	flash alternatingly		Bearer material is measured
5.	Briefly press teach button	On → Off	On/Off	Optimal values of the material have been saved
6.	Sensor is in operating mode	On	On	Switching threshold has been saved


**Toggleing the switching hysteresis**

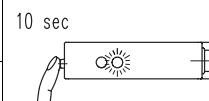
Via the switching hysteresis, the basic sensitivity (standard/minimal) can be set. No label tape has to be inserted. A new teach is not required.

**Standard switching hysteresis**

	Operation	LED green	LED yellow	Sensor
1.	Press teach button for 10 s	Off → On	On/Off	
2.		flash simultaneously		Acknowledgement button press
3.	after a further 3s	fast	On	Standard switching hysteresis
4.	Release teach button	On	On/Off	Switching hysteresis has been set
5.	Sensor is in operating mode	On	On/Off	


**Minimum switching hysteresis**

	Operation	LED green	LED yellow	Sensor
1.	Press teach button for 10 s	Off → On	On/Off	Acknowledgement button press
2.		flash fast simultaneously		
3.	after a further 3s	fast	On	Standard switching hysteresis
4.	after a further 3s	fast	Off	Minimum switching hysteresis
5.	Release teach button	On	On/Off	Switching hysteresis has been set
6.	Sensor is in operating mode	On	On/Off	



If the teach button continues to be pressed, both LEDs flash with high frequency. The toggle mode is terminated and the sensor retains the previously set switching hysteresis. The sensor only returns to operational readiness after the teach button is released.



## Order guide

Selection table		Order code →															
Equipment ↓		GS 06/66-2 Part No. 500 39567	GS 06/66-2, 150-S12 Part No. 500 39558	GS 06/66-2-S8 Part No. 500 39565	GS 06/66D-2, 430-S12 Part No. 500 39562	GS 06/66.2-2 Part No. 500 39569	GS 06/66.2-2-S8 Part No. 500 39571	GS 06/6.3-2-S8 Part No. 500 39573	GS 06/6D.3-2-S8 Part No. 501 01691	GS 06/66-5 Part No. 500 39568	GS 06/66-5, 360 Part No. 500 39560	GS 06/66-5-S8 Part No. 500 39566	GS 06/66.2-5 Part No. 500 39570	GS 06/66.2-5-S8 Part No. 500 39572	GS 06/66.2-5, 150-S12 Part No. 501 02994	GS 06/6.3-5-S8 Part No. 500 39575	
Mouth width	2mm	●	●	●	●	●	●	●	●								
	5mm									●	●	●	●	●	●	●	●
Connection / Weight	M8 connector / 80g			●				●	● <sup>1)</sup>	●		●		●		●	●
	cable 360mm / 90g										●						
	cable 2000mm / 125g	●				●				●			●				
	cable 150mm with M12 connector / 95g		●													●	
	cable 430mm with M12 connector / 100g				●												
Adjustment	potentiometer	●	●	●	●					●	●	●					
	teach button					●	●						●	●	●		
	teach button + teach input (pin 2)							●	●								●
Switching output	2 x Push-Pull Pin 2: PNP dark switching, NPN light switching Pin 4: PNP light switching, NPN dark switching	●	●	●		●	●			●	●	●	●	●	●	●	
	1 x Push-Pull Pin 2: teach input Pin 4: PNP light switching, NPN dark switching							●									●
	1 x Push-Pull Pin 2: teach input Pin 4: PNP dark switching, NPN light switching								●								
	2 x Push-Pull Pin 2: PNP dark switching, NPN light switching Pin 4: PNP dark switching, NPN light switching				●												

1) When using right-angle plugs: cable outlet should point upward!