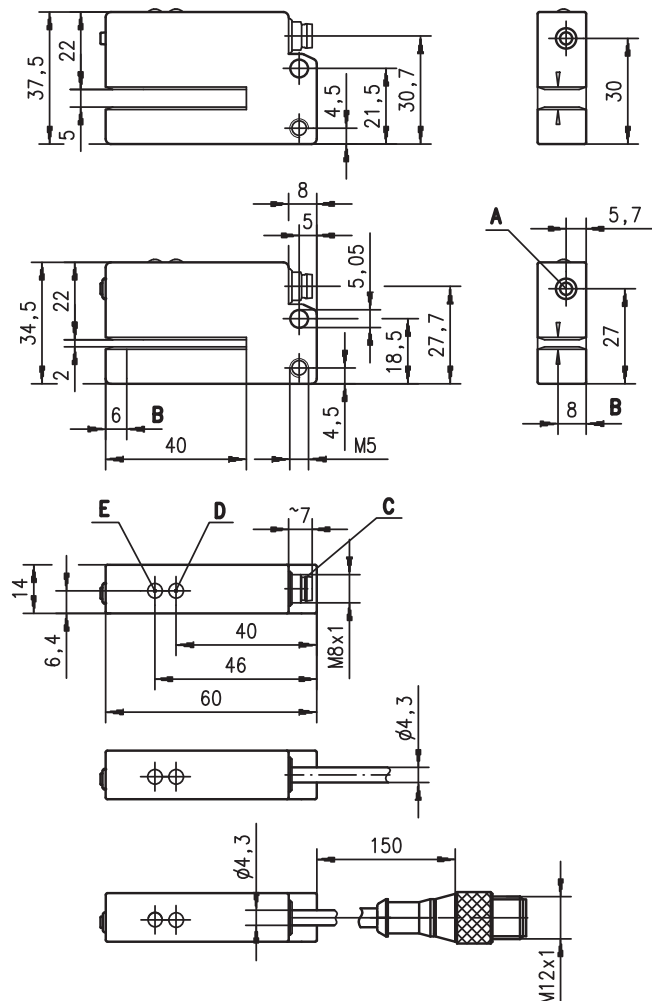


GS 06

Forked photoelectric sensors

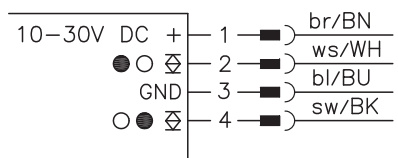
Dimensioned drawing



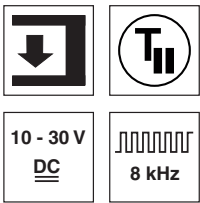
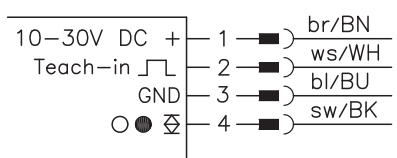
- A** Teach-in button or potentiometer
- B** Optical axis
- C** Connector M8x1
- D** Indicator diode ready/teach-in (green)
- E** Indicator diode switching output/teach-in (yellow)

Electrical connection

GS 06/66 ...



GS 06/6.3 ...
GS 06/6D.3 ...



**2mm
5mm**

- Forked photoelectric sensor for precise detection of labels on stock material
- Easy and reliable setting via multiturn potentiometer or, as an option, 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



Accessories:

(available separately)

- M8 / M12 connectors (KD ...)
- Cable with M8 connector (K-D...)
- Cable with M12 connector (K-D...)

en 06-2014/05 50110931-01

We reserve the right to make changes • DS_GS06_en_50110931_01.fm

Specifications

Optical data

Mouth width	2 mm or 5 mm (see table)
Light source	LED (modulated light)
Wavelength	880 nm (infrared)

Timing

Switching frequency	8000 Hz
Response time	0.0625 ms
Delay before start-up	≤ 100 ms

Electrical data

Operating voltage U_B ¹⁾	10 ... 30 VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Open-circuit current	≤ 40 mA
Switching output ²⁾	see table
Signal voltage high/low	≥ ($U_B - 2V$) / ≤ 2V
Output current	100 mA
Sensitivity	may be set via teach-in button, teach-in input or potentiometer (see table)

Indicators

Yellow LED	light path free/switching point in the label gap ready
Green LED	

Mechanical data

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

Environmental data

Ambient temp. (operation/storage)	-20 °C ... +60 °C / -30 °C ... +70 °C
Protective circuit ³⁾	1, 2
VDE safety class	III
Protection class	IP 65
Light source	free group (in accordance with EN 62471)
Standards applied	IEC 60947-5-2
Certifications	UL 508, C22.2 No.14-13 ^{1) 4)}

Teach-in input

Active/not active	≥ 8V / ≤ 2V
Activation/disable delay	≤ 0,2 ms
Input resistance	10 kΩ

- 1) For UL applications: for use in class 2 circuits according to NEC only
- 2) The push-pull switching outputs must not be connected in parallel
- 3) 1=polarity reversal protection, 2=short-circuit protection for all outputs
- 4) These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

Remarks

- 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.

Approved purpose:

The forked photoelectric sensors are optical electronic sensors for optical, contactless detection of objects.

This product may only be used by qualified personnel and must only be used for the approved purpose. This sensor is not a safety sensor and is not to be used for the protection of persons.

Order guide

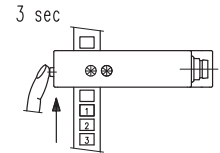
See table on page 4 !

GS 06

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

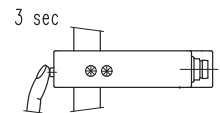
The sensor can be taught while the plant is running. The plant should be operated at commissioning speed.

	Operation	Green LED	Yellow LED	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 alternately		Teach process has been started
5.	Transport the label tape so that 3 ... 5 label gaps pass the sensor	Flash alternately		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	Green LED	Yellow LED	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 alternately		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



Teach for maximum transmitting power (availability dependent on level of production)

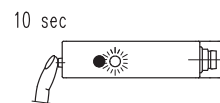
- Interrupt light path in the forked sensor (piece of sheet metal, cardboard, or similar).
- Perform static teach.

Toggling 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.

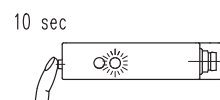
Standard switching hysteresis

	Operation	Green LED	Yellow LED	Sensor
1.	Press teach button for 10s	Off → On	On/Off	
2.		Flash fast 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	Green LED	Yellow LED	Sensor
1.	Press teach button for 10s	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	GS 06/6-2-S8-3 Part No. 501 03601	GS 06/66-6-2 Part No. 500 41261	GS 06/66-26-2 Part No. 501 03524	GS 06/66-26-2-S8 Part No. 501 03495	GS 06/66-26-1-2-S8 Part No. 501 03541	GS 06/66-6-2, 550 Part No. 501 05653	
Colour	red RAL 3000	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●						
	black RAL 9004																	●	●	●	●	●	
Mouth width	2mm	●	●	●	●	●	●	●	●									●	●	●	●	●	
	5mm									●	●	●	●	●	●	●	●						
Connection (weight)	M8 connector (80g)			●			●	● ¹⁾	●			●		●		●	● ²⁾				●	●	
	cable 360mm (90g)										●												
	cable 550mm (100g)																						● ³⁾
	cable 2000mm (125g)	●				●				●			●						●	●			
	cable 150mm with M12 connector (95g)		●													●							
	cable 430mm with M12 connector (100g)				●																		
Configuration	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	●	●	●		●	●			●	●	●	●	●	●	●	● ⁴⁾	●	●	●	●	●	●
	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				●																		
UL		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

- 1) When using right-angle plugs: cable outlet should point upward!
- 2) 3-pin connector M8
- 3) Customer-specific model
- 4) 1 x push-pull, PNP light switching, NPN dark switching