

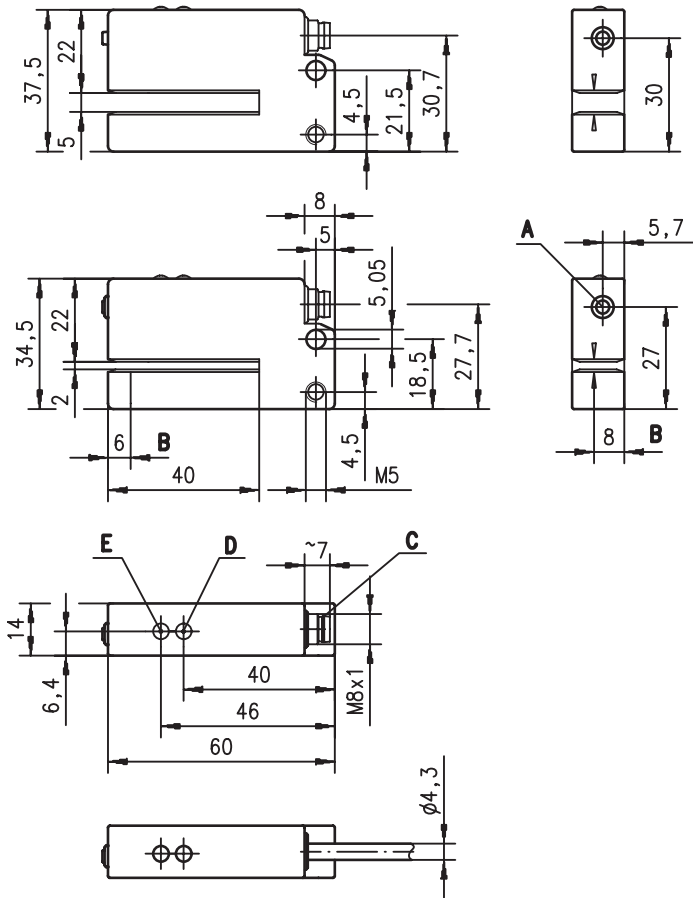


GS 06

Forked photoelectric sensor



Dimensioned drawing



2mm
5mm

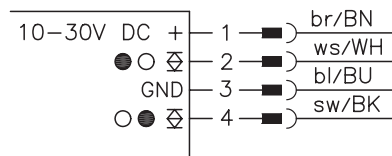


- Forked photoelectric sensor for precise detection of labels on stock material
- Easy and reliable setting via teach-in button (two-value teach-in)
- Setting to bearer/label gap or during operation
- Robust metal housing with bevelled inlet edges
- Mounting holes and M8 connector for fast installation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

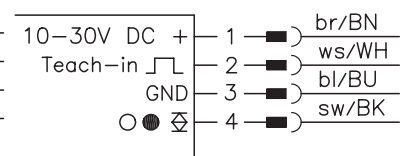
- A Teach-in button
- B Optical axis
- C Connector M8x1
- D Indicator diode ready/teach-in (green)
- E Indicator diode switching output (yellow)

Electrical connection

GS 06/66.2 ...



GS 06/6.3 ...



We reserve the right to make changes * gs_a2Be.fm



Accessories:

- Ready-made cables (KB ...)



Specifications

Optical data	
Mouth width	2mm or 5mm
Timing	
Switching frequency	8000Hz
Response time	0.0625ms
Delay before start-up	≤100ms
Electrical data	
Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 40mA
Switching output ¹⁾	2 push-pull switching outputs pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
Signal voltage high/low	$\geq (U_B - 2V) / \leq 2V$
Output current	100mA
Sensitivity	may be set via teach-in button
Indicators	
LED yellow	light path free/switching point in the label gap
LED green	ready
Mechanical data	
Housing	diecast zinc
Weight	125g cable (connector 80g)
Connection type	M8 connector or cable: 2000mm
Environmental data	
Ambient temp. (operation/storage)	-20°C ... +60°C / -30°C ... +70°C
Protective circuit ²⁾	1, 2
VDE safety class	III
Protection class	IP 65
Teach-in input	
Active/not active	$\geq 8V / \leq 2V$
Activation/disable delay	≤ 0.2ms
Input resistance	10kΩ

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

	Designation	Part No.
2mm mouth width		
with M8 connector	GS 06/66.2-2-S8	500 39571
with 2m cable	GS 06/66.2-2	500 39569
with external Teach-line and M8 connector	GS 06/6.3-2-S8	500 39573
5mm mouth width		
with M8 connector	GS 06/66.2-5-S8	500 39572
with 2m cable	GS 06/66.2-5	500 39570
with external Teach-line and M8 connector	GS 06/6.3-5-S8	500 39575

Remarks

To achieve a proper operation, an electric connection between sensor and machine earth must be ensured.

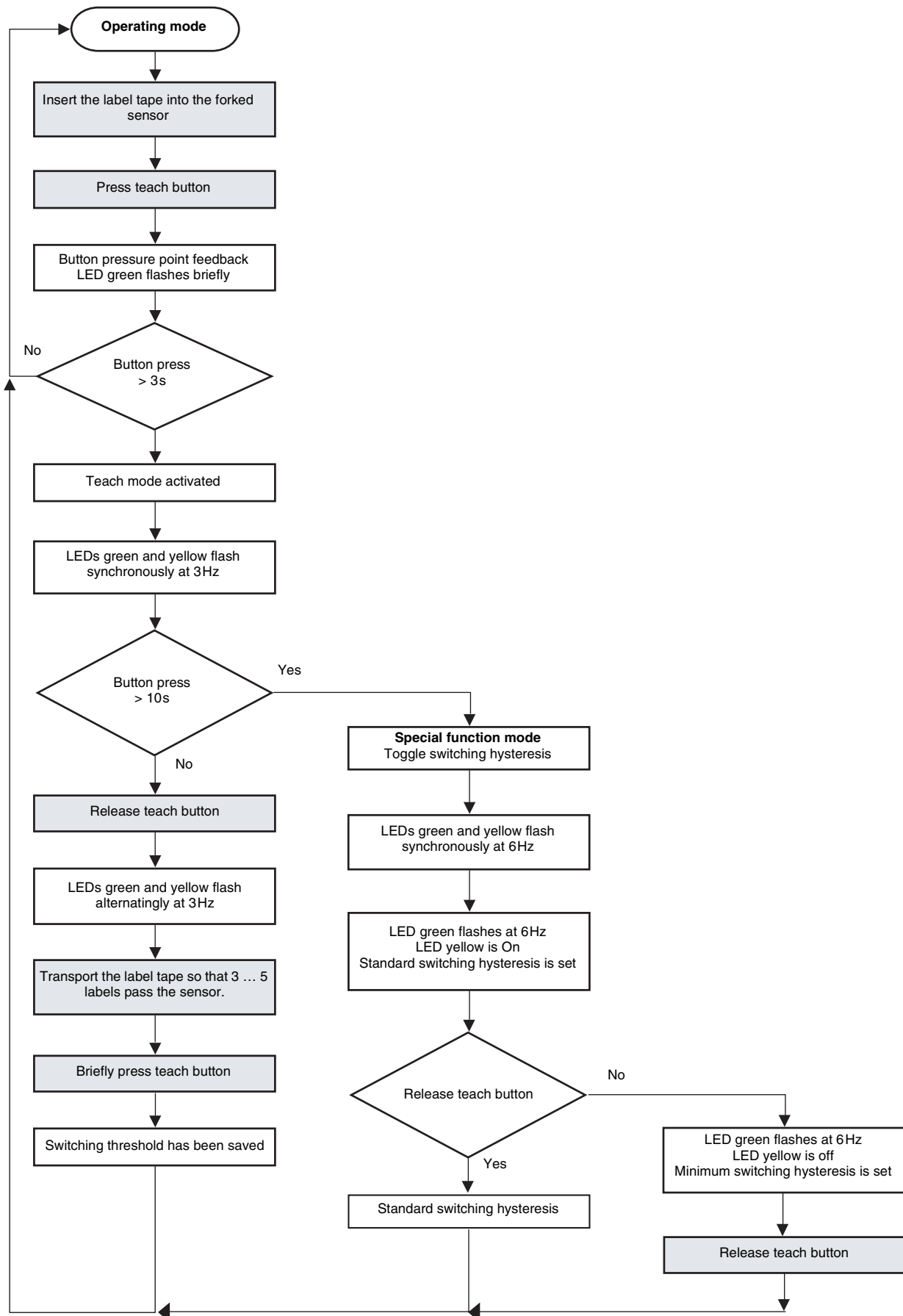
The sensor ships with the standard switching hysteresis.

For the detection of slightly transparent labels, the minimum switching hysteresis may be used.



GS 06

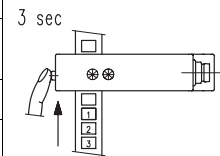
Teach-In for GS 06 ...



Teaching during dynamic operation, teaching for bearer and label

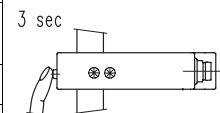
The sensor can be taught while the plant is running. The plant should be operated at commissioning speed.

	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.		3Hz synchronously		
4.	Release teach button	3Hz alternatingly		Teach process has been started
5.	Transport the label tape so that 3 ... 5 label gaps pass the sensor.	3Hz 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 during static operation, teaching for bearer if the label tape cannot be transported.

	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.		3Hz synchronously		
4.	Release teach button	3Hz 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

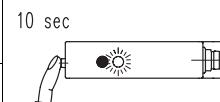


Toggling the switching hysteresis

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.

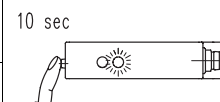
Standard switching hysteresis

	Operation	LED green	LED yellow	Sensor
1.	Press teach button for 10 s	Off → On	On/Off	
2.		6Hz synchronously		Acknowledgement button press
3.	after a further 3s	6Hz	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.		6Hz synchronously		
3.	after a further 3s	6Hz	On	Standard switching hysteresis
4.	after a further 3s	6Hz	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.