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DATA SHEET

GLL170-P333

GLL170
Fiber-optic sensors

SICK Sensor Intelligence



Illustration may differ

FIBER-OPTIC SENSORS

GLL170-P333

ORDERING INFORMATION

Type	part no.
GLL170-P333	6063336

Further device versions and accessories at www.sick.com/GLL170

DETAILED TECHNICAL DATA

FEATURES

Device type	Fiber-optic amplifier
Device type detail	Stand-alone
Functional principle detail	Depending on the optical fiber cable used
Sensing range max.	Depending on the optical fiber cable used
Emitted beam	
Light source	LED [1]
Type of light	Visible red light
Key LED figures	
Normative reference	EN 62471:2008-09 | IEC 62471:2006, modified
LED risk group marking	Free group
Wave length	632 nm
Average service life	100,000 h at T_a = +25 °C
Adjustment	
Potentiometer	For setting the sensing range/for setting the switching mode/for adjusting the switch-off delay
Display	
LED green	Operating indicator Static on: power on Dimmed in the range +/- 10 % of the switching threshold
LED yellow	Status of digital output Permanently on: Switching output active Permanently off: Digital output not active

[1] Average service life: 100,000 h at T_U = +25 °C.

SAFETY-RELATED PARAMETERS

$MTTF_D$	760 years
DC_{avg}	0 %
T_M (mission time)	20 years

ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC [1]
Ripple	≤ 10 % [2]
Current consumption	≤ 30 mA [3]
Protection class	III
Digital output	
Number	1
Type	PNP [4]
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. U_B-1.5 V / 0 V
Signal voltage NPN HIGH/LOW	Approx. U_B / < 1.5 V
Output current $I_{max.}$	≤ 100 mA
Circuit protection outputs	Reverse polarity protected Overcurrent protected Short-circuit protected
Response time	≤ 250 µs
Switching frequency	2 kHz
Time functions	Without time delay, off delay
Delay time	Selectable via rotary switch, 0 ms ... 40 ms
Pin/Wire assignment	
Function of pin 4/black (BK)	Digital output, received light → Output Q1 HIGH
Function of pin 4/black (BK) – detail	The pin 4 function of the sensor can be configured

[1] Limit values.

[2] May not fall below or exceed U_V tolerances.

[3] Without load.

[4] Selectable via rotary switch.

MECHANICS

Housing	Rectangular
Dimensions (W x H x D)	10 mm x 31.7 mm x 72.5 mm
Connection	Connector M8, 3-pin
Connection detail	
Conductor size	0.2 mm²
Cable diameter	Ø 3.8 mm
Material	
Housing	Plastic, PC/POM
Cable	Plastic, PVC
Weight	19 g
Maximum tightening torque of the fixing screws	0.5 Nm

AMBIENT DATA

Enclosure rating	IP66 (EN 60529)
Ambient operating temperature	–25 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C
Typ. Ambient light immunity	Artificial light: ≤ 5,000 lx Sunlight: ≤ 60,000 lx
Shock resistance	50 g, 11 ms (3 positive and 3 negative shocks along X, Y, Z axes, 18 total shocks (EN60068-2-27))
Vibration resistance	10 Hz ... 55 Hz (Amplitude 1 mm, 3 x 30 min (EN60068-2-6))
Air humidity	35 % ... 95 %, relative humidity (no condensation)
Electromagnetic compatibility (EMC)	EN 60947-5-2
UL File No.	NRKH2.E300503 & NRKH8.E300503
RoHS certificate	✓

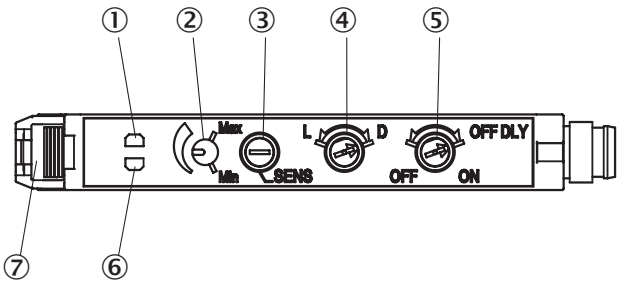
SMART TASK

Timer function	Deactivated Switch-on delay Off delay Impulse (one shot)

CERTIFICATES

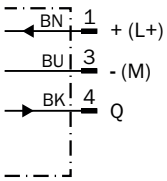
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cRUus certificate	✓

ADJUSTMENTS GLL170

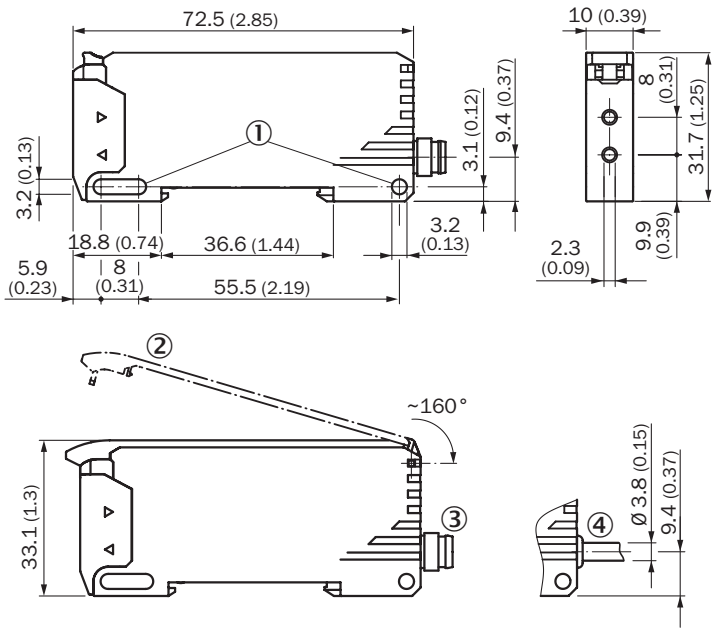


① LED indicator orange, lights up when switching output is active
② Sensitivity scale 230°
③ Sensitivity control: potentiometer, 8 turns
④ Selector switch: "L.ON" (light switching) /"D.ON" (dark switching)
⑤ OFF delay selector switch: “ON” (on)/“OFF” (off), 40 ms fixed
⑥ LED signal strength indicator green, lights up, when light received< 0.9 or >1.1 (switching threshold = 1)
⑦ Locking the fiber-optic cables

CONNECTION DIAGRAM CD-045



DIMENSIONAL DRAWING



Dimensions in mm (inch)
① Mounting holes
② protective hood (optional), opens approx. 160°
③ Connector M8
④ cable

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6063336

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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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