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DATA SHEET

# GLL70P-1HTGY1DZZZZZ1Z1

GLL70
Fiber-optic sensors

SICK Sensor Intelligence

Illustration may differ

## FIBER-OPTIC SENSORS

# GLL70P-1HT-GY1DZZZZZ1Z1

### ORDERING INFORMATION

| Type | part no. |
|---|---|
| GLL70P-1HTGY1DZZZZZ1Z1 | 6087429 |

Further device versions and accessories at www.sick.com/GLL70

## 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 |
| 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 | 660 nm |
| Average service life | 100,000 h at $T_a$ = +25 °C |
| Adjustment | |
| Wire/pin | For deactivation of the sender and execution of test logic<br>For setting the sensing range<br>For synchronizing the output signal with the trigger signal |
| Display + operating buttons | For configuring the sensor parameters |
| Display | |
| LED green | Operating indicator<br>Static on: power on |
| LED yellow | Status of digital output<br>Permanently on: Switching output active<br>Permanently off: Digital output not active<br>Flashing: Executing teach-in/teach-in error |
| Display | Display of sensor functions<br>Menu languages. German, English, Chinese, Korean |

## SAFETY-RELATED PARAMETERS

| | |
|---|---|
| $MTTF_D$ | 581.5 years |
| $DC_{avg}$ | 0% |
| $T_M$ (mission time) | 20 years |

## ELECTRONICS

| | |
|---|---|
| Supply voltage $U_B$ | 10 V DC ... 30 V DC [1] |
| Ripple | ± 10 % |
| Current consumption | ≤ 50 mA |
| Protection class | III |
| Digital output | |
| Number | 1 |
| Type | PNP [2] |
| | NPN: open collector [2] |
| Signal voltage PNP HIGH/LOW | Approx. $U_B$-2.5 V / 0 V |
| Signal voltage NPN HIGH/LOW | Approx. $U_B$ / < 2.5 V |
| Output current $I_{max.}$ | ≤ 100 mA |
| Circuit protection outputs | Reverse polarity protected |
| | Overcurrent protected |
| | Short-circuit protected |
| Response time | ≤ 50 µs |
| | ≤ 250 µs |
| | ≤ 1,000 µs |
| | ≤ 4,000 µs |
| Switching frequency | 10 kHz [3] |
| | 2 kHz |
| | 500 Hz |
| | 31.25 Hz |
| Time functions | Switch-on delay |
| | Off delay |
| | ON and OFF delay |
| | Impulse (one shot) |
| | Switch-on delay and pulse |
| | Deactivated |
| Delay time | Adjustment via operating buttons, 0 ms ... 30,000 ms |
| Digital input | |
| Number | 1 |
| Pin/Wire assignment | |
| Function of pin 4/black (BK) | Digital output, object present → Output Q HIGH |
| Function of pin 4/black (BK) – detail | The pin 4 function of the sensor can be configured |
| Function of pin 2/white (WH) | Teach-in input |
| Function of pin 2/white (WH) – detail | The pin 2 function of the sensor can be configured |

[1] Limit values.

[2] Selectable via menu.

[3] With light/dark ratio 1:1.

## MECHANICS

| | |
|---|---|
| Housing | Rectangular |
| Dimensions (W x H x D) | 10.7 mm x 33.3 mm x 82.1 mm |
| Connection | Cable, 4-wire, 2 m |
| Connection detail | |
| Deep-freeze property | Do not bend below 0 °C |
| Conductor size | 0.18 mm² |
| Cable diameter | Ø 4 mm |

| | |
|---|---|
| Length of cable (L) | 2 m |
| Material | |
| Housing | Plastic, PC |
| Protection hood | Plastic, PC |
| Display | Plastic, PET |
| Operating buttons | Plastic, POM |
| Cable | Plastic, PVC |
| Weight | Approx. 74 g |

## AMBIENT DATA

| | |
|---|---|
| Enclosure rating | IP50 (EN 60529) |
| Ambient operating temperature | –25 °C ... +55 °C |
| Ambient temperature, storage | –40 °C ... +70 °C |
| Typ. Ambient light immunity | Artificial light: ≤ 16,000 lx<br>Sunlight: ≤ 67,000 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 1.5 mm, 3 x 120 min (EN60068-2-6)) |
| Air humidity | 35 % ... 85 %, relative humidity (no condensation) |
| Electromagnetic compatibility (EMC) | EN 60947-5-2 |
| UL File No. | NRKH.E300503 & NRKH7.E300503 |

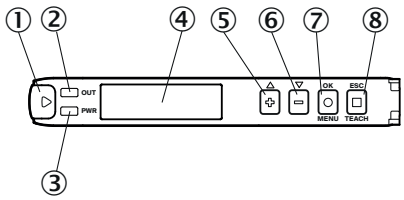
## SMART TASK

| | |
|---|---|
| Timer function | Deactivated<br>Switch-on delay<br>Off delay<br>ON and OFF delay<br>Impulse (one shot)<br>Switch-on delay and pulse |
| Inverter | Yes |

## CERTIFICATES

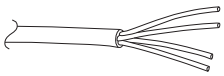
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cRUus certificate | ✓ |
| Photobiological safety (IEC EN 62471) | ✓ |

### DISPLAY AND ADJUSTMENT ELEMENTS

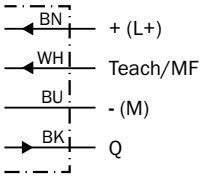



① Fiber optic interlock
② LED yellow
③ LED green
④ Display
⑤ (+) button
⑥ (-) pushbutton
⑦ Menu/OK pushbutton
⑧ Teach-in/escape pushbutton

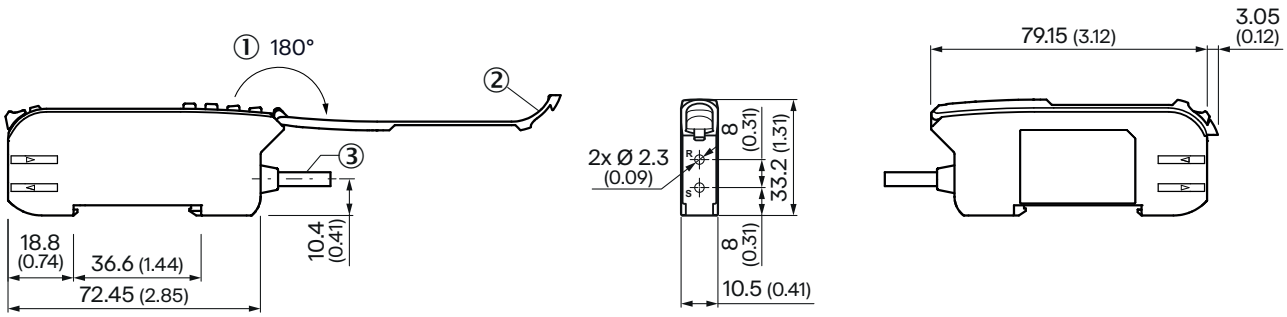
### CONNECTION TYPE CABLE, 4-WIRE



### CONNECTION DIAGRAM CD-604




### DIMENSIONAL DRAWING




Dimensions in mm (inch)
① aperture angle
② Hinged cover for the pushbuttons
③ Connection

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/6087429

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