



# GLL170-P334S06

GLL170

FIBER-OPTIC AMPLIFIER

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type           | Part no. |
|----------------|----------|
| GLL170-P334S06 | 6071258  |

Other models and accessories → [www.sick.com/GLL170](http://www.sick.com/GLL170)

### Detailed technical data

#### Features

|  |  |
|--|--|
| <b>Device type</b>                     | Fiber-optic amplifier  |
| <b>Device type detail</b>              | Stand-alone  |
| <b>Dimensions (W x H x D)</b>          | 10 mm x 31.7 mm x 72.5 mm  |
| <b>Housing design (light emission)</b> | Rectangular  |
| <b>Sensing range max.</b>              | 0 mm ... 190 mm (Proximity system) <sup>1) 2)</sup><br>0 mm ... 800 mm (Through-beam system) <sup>3)</sup> |
| <b>Sensing range</b>                   | 0 mm ... 160 mm, Proximity system <sup>1) 2)</sup><br>0 mm ... 700 mm, Through-beam system <sup>3)</sup>   |
| <b>Type of light</b>                   | Visible red light  |
| <b>Light source</b>                    | LED <sup>4)</sup>  |
| <b>Wave length</b>                     | 632 nm   |
| <b>Adjustment</b>                      | Potentiometer, 8 turns <sup>5)</sup>   |
| <b>Indication</b>                      | LED  |
| <b>Display</b>                         | Status LEDs  |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> LL3-DK06.

<sup>3)</sup> LL3-TB02.

<sup>4)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

<sup>5)</sup> Sensitivity scale 230°.

## Mechanics/electronics

|  |  |
|--|--|
| <b>Supply voltage <math>U_B</math></b> | 10 V DC ... 30 V DC <sup>1)</sup>  |
| <b>Ripple</b>                          | $\leq 10\%$ <sup>2)</sup>  |
| <b>Current consumption</b>             | 30 mA <sup>3)</sup>  |
| <b>Switching output</b>                | PNP  |
| <b>Number of switching outputs</b>     | 1  |
| <b>Switching mode</b>                  | Light/dark switching   |
| <b>Switching mode selector</b>         | Selectable via rotary switch   |
| <b>Response time</b>                   | $\leq 250\ \mu\text{s}$ <sup>4)</sup>                                    |
| <b>Switching frequency</b>             | 2 kHz  |
| <b>Time functions</b>                  | Without time delayoff delay  |
| <b>Delay time</b>                      | Selectable via rotary switch, 0 ms ... 40 ms                             |
| <b>Connection type</b>                 | Male connector M8, 4-pin   |
| <b>Cable material</b>                  | Plastic, PVC   |
| <b>Conductor cross section</b>         | 0.2 mm <sup>2</sup>  |
| <b>Cable diameter</b>                  | $\varnothing 3.8\ \text{mm}$   |
| <b>Circuit protection</b>              | A <sup>5)</sup><br>B <sup>6)</sup><br>C <sup>7)</sup><br>D <sup>8)</sup> |
| <b>Protection class</b>                | III  |
| <b>Weight</b>                          | 19 g   |
| <b>Housing material</b>                | Plastic, PC/POM  |
| <b>Tightening torque, max.</b>         | 0.5 Nm   |
| <b>Enclosure rating</b>                | IP66 <sup>9)</sup>   |
| <b>Items supplied</b>                  | BEF-WLL180 mounting bracket  |
| <b>Ambient operating temperature</b>   | -25 °C ... +55 °C  |
| <b>Ambient temperature, storage</b>    | -40 °C ... +70 °C  |
| <b>UL File No.</b>                     | NRKH2.E300503 & NRKH8.E300503  |

<sup>1)</sup> Limit values.

<sup>2)</sup> May not fall below or exceed  $U_y$  tolerances.

<sup>3)</sup> Without load.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> A =  $V_S$  connections reverse-polarity protected.

<sup>6)</sup> B = inputs and output reverse-polarity protected.

<sup>7)</sup> C = interference suppression.

<sup>8)</sup> D = outputs overcurrent and short-circuit protected.

<sup>9)</sup> With correctly attached fibre-optic cable LL3.

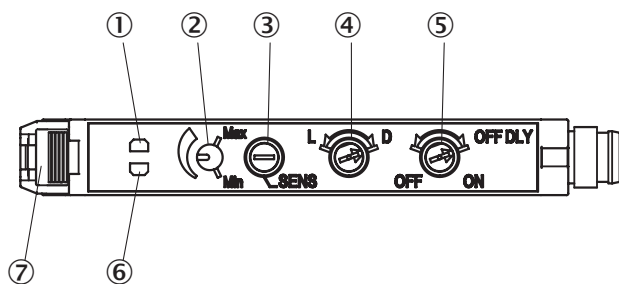
## Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270905 |
| <b>ECLASS 5.1.4</b> | 27270905 |
| <b>ECLASS 6.0</b>   | 27270905 |
| <b>ECLASS 6.2</b>   | 27270905 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 7.0</b>     | 27270905 |
| <b>ECLASS 8.0</b>     | 27270905 |
| <b>ECLASS 8.1</b>     | 27270905 |
| <b>ECLASS 9.0</b>     | 27270905 |
| <b>ECLASS 10.0</b>    | 27270905 |
| <b>ECLASS 11.0</b>    | 27270905 |
| <b>ECLASS 12.0</b>    | 27270905 |
| <b>ETIM 5.0</b>       | EC002651 |
| <b>ETIM 6.0</b>       | EC002651 |
| <b>ETIM 7.0</b>       | EC002651 |
| <b>ETIM 8.0</b>       | EC002651 |
| <b>UNSPSC 16.0901</b> | 39121528 |

### Adjustments

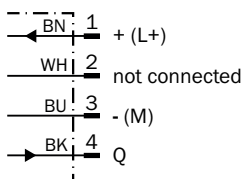
GLL170



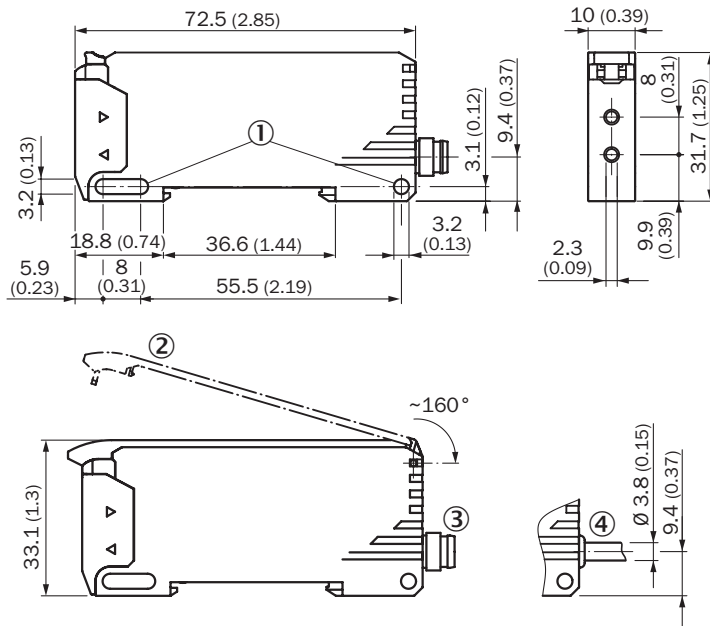
- ① LED indicator orange, lights up when switching output is active
- ② Sensitivity scale 230°
- ③ Sensitivity control: potentiometer, 8 turns
- ④ Selector switch: "L.ON" ( light switching) /"D.ON" ( dark switching)
- ⑤ OFF delay selector switch: "ON" (on)/"OFF" (off), 40 ms fixed
- ⑥ LED signal strength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

### Connection diagram

Cd-066



Dimensional drawing (Dimensions in mm (inch))



- ① Mounting holes
- ② Protective hood (optional), opens approx. 160°
- ③ Connector M8
- ④ Cable

Recommended accessories

Other models and accessories → [www.sick.com/GLL170](http://www.sick.com/GLL170)

|                                | Brief description  | Type       | Part no. |
|--------------------------------|--|------------|----------|
| Device protection (mechanical) |  |            |          |
|                                | Protective Hood for GLL170, opens approx. 160°, PC   | BF-GLL170  | 5336263  |
| Mounting brackets and plates   |  |            |          |
|                                | Mounting bracket, steel, zinc coated, without mounting hardware  | BEF-WLL180 | 5325812  |
| Others                         |  |            |          |
|                                | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li> </ul> | DOS-0804-G | 6009974  |
|                                | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Solder connection</li> <li>• <b>Permitted cross-section:</b> ≤ 0.25 mm²</li> </ul>                | DOS-0804-W | 6009975  |
|                                | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm² ... 0.5 mm²</li> </ul>   | STE-0804-G | 6037323  |

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>  | YF8U14-020VA3XLEAX | 2095888  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>  | YF8U14-050VA3XLEAX | 2095889  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 10 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YF8U14-100VA3XLEAX | 2095890  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>    | YG8U14-020VA3XLEAX | 2095962  |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>    | YG8U14-050VA3XLEAX | 2095963  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 10 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>   | YG8U14-100VA3XLEAX | 2095964  |
| Fibers  |   |                    |          |
|   | LL3-DB01  | LL3-DB01           | 5308074  |
|   | LL3-DB02  | LL3-DB02           | 5308083  |
|   | LL3-DC38  | LL3-DC38           | 5322472  |
|   | LL3-DR11  | LL3-DR11           | 5326000  |
|   | LL3-DT01  | LL3-DT01           | 5308076  |
|   | LL3-DV05  | LL3-DV05           | 5322549  |
|   | LL3-TB01  | LL3-TB01           | 5308050  |
|   | LL3-TH08  | LL3-TH08           | 5325978  |
|   | LL3-TS40  | LL3-TS40           | 5323971  |
|   | LL3-TV05  | LL3-TV05           | 5322546  |
|   | LL3-TX01  | LL3-TX01           | 5324173  |
|   | LL3-TY01  | LL3-TY01           | 5308066  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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