



## Switching automation light grids PLG, PLG3

PLG3-420F431



**Model Name** > [PLG3-420F431](#)  
**Part No.** > [1029132](#)



**At a glance**

- 360° visible job LED
- Range up to 2 m
- Flexible detection heights from 120 mm to 420 mm
- Immune to reflected and ambient light
- Switchable job LED: permanently lit or flashing
- Optically confirms the right bin was picked
- Bus connection possible

**Your benefits**

- The integrated job LED reduces the order picker's search time
- Low assembly costs thanks to the PLG's clever design
- High availability thanks to an integrated polarizing filter
- Tough aluminum housing ensures that sensor damage is kept to a minimum and helps reduce repair costs
- Reflective tape on the sensor avoids additional assembly and cabling costs



**Features**

|                                  |                             |
|----------------------------------|-----------------------------|
| Technology:                      | Retro-reflective light grid |
| Task:                            | Switching light grid        |
| Minimum detectable object (MDO): | Parallel beam, 35 mm        |
| Beam separation:                 | 30 mm                       |
| Number of beams:                 | 15                          |
| Detection height:                | 420 mm                      |

**Performance**

|                                          |                         |
|------------------------------------------|-------------------------|
| Maximum range (PL150):                   | 2 m                     |
| Minimum range:                           | ≥100 mm                 |
| Working range (PL150):                   | 1.3 m                   |
| Response time <sup>1)</sup> :            | Parallel beam: > 100 ms |
| Maximum range (reflective tape REF-PLG): | 1.5 m                   |
| Working range (reflective tape REF-PLG): | 1 m                     |

<sup>1)</sup> With resistive load

**Interfaces**

|                  |                                                |
|------------------|------------------------------------------------|
| Output type:     | 1 x PNP (Q)                                    |
| Connection type: | Short cable (0.28 m) with connector M12, 4-pin |
| Input current:   | 12 mA                                          |
| Job LED input:   | PNP                                            |

### Mechanics/electronics

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|                                             |                                                                                                           |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Wave length:                                | 650 nm                                                                                                    |
| Supply voltage $V_s$ <sup>1)</sup> :        | DC 15 V ... 30 V                                                                                          |
| Power consumption sender:                   | < 45 mA                                                                                                   |
| Current consumption job LED <sup>2)</sup> : | 10 mA                                                                                                     |
| Ripple:                                     | < 5 Vpp                                                                                                   |
| Output current $I_{max.}$ :                 | 100 mA                                                                                                    |
| Output load capacitive:                     | 100 nF                                                                                                    |
| Output load inductive:                      | 1 H                                                                                                       |
| Initialization time:                        | 0.6 s                                                                                                     |
| Dimensions (W x H x D):                     | 35.6 mm x 499 mm x 19 mm                                                                                  |
| Housing material:                           | Aluminum                                                                                                  |
| Indication:                                 | LED                                                                                                       |
| Enclosure rating:                           | IP 54                                                                                                     |
| Circuit protection:                         | Output Q short-circuit protected<br>Interference suppression<br>VS connections reverse-polarity protected |
| Weight:                                     | 500 g                                                                                                     |
| Front screen:                               | PMMA                                                                                                      |
| Output mode <sup>3)</sup> :                 | Q dark switching                                                                                          |

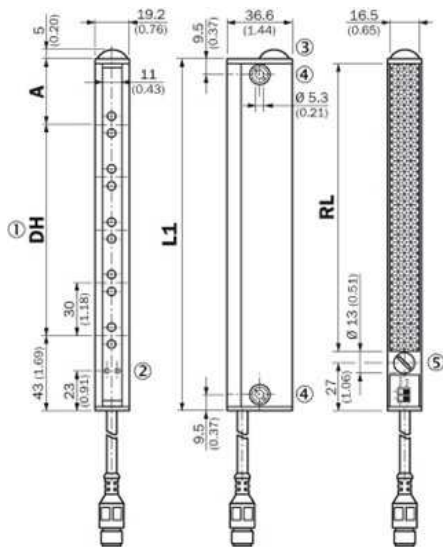
1) 2) Typical value    3) Q = active in case one beam is interrupted, /Q = active in case all beam are free

### Ambient data

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|                       |                                                      |
|-----------------------|------------------------------------------------------|
| Protection class:     | III                                                  |
| EMC:                  | EN 60947-5-2                                         |
| Ambient temperature:  | Operation: -10 ... +55 °C<br>Storage: -40 ... +70 °C |
| Vibration resistance: | 5 g, 10 Hz ... 55 Hz (IEC 68-2-6)                    |
| Shock load:           | 10 g/DIN EN 60068-2-29/16 ms                         |

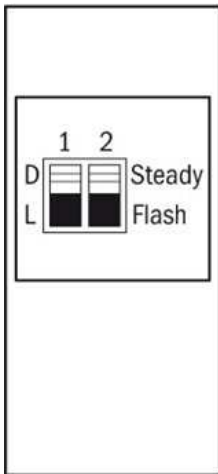
## Dimensional drawing



| DH                 | A         | L1          | RL          |
|--------------------|-----------|-------------|-------------|
| <b>120 (4.72)</b>  | 36 (1.42) | 199 (7.83)  | 162 (6.38)  |
| <b>210 (8.27)</b>  | 26 (1.02) | 279 (10.98) | 242 (9.53)  |
| <b>270 (10.63)</b> | 36 (1.42) | 349 (13.74) | 312 (12.28) |
| <b>360 (14.17)</b> | 26 (1.02) | 429 (16.89) | 392 (15.43) |
| <b>420 (16.54)</b> | 36 (1.42) | 499 (19.65) | 462 (18.19) |

- |1| Detection height (DH)
- |2| Indicator Power on: green; beam status: yellow
- |3| Job-LED, green
- |4| Mounting hole, Ø 5.3 mm
- |5| Configuration switches

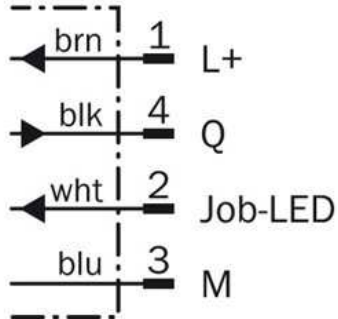
## Adjustments



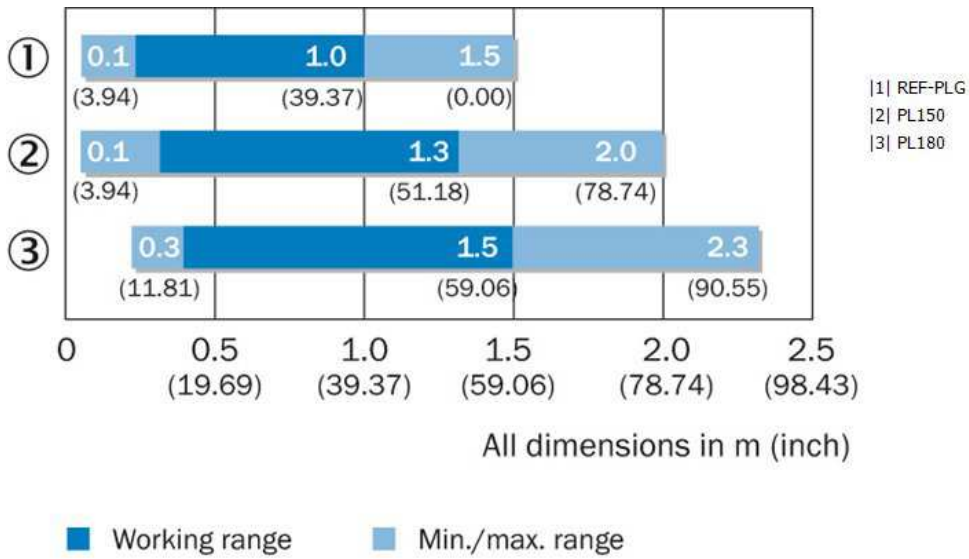
### Configuration over switches

|                 |        |                                           |
|-----------------|--------|-------------------------------------------|
| <b>Switch 1</b> | D      | Output active, in case of blocked beams   |
|                 | L      | Output inactive, in case of blocked beams |
| <b>Switch 2</b> | Steady | Job-LED steady                            |
|                 | Flash  | Job-LED flashes, 3 Hz                     |

Connection type and diagram



Characteristic curve: range



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