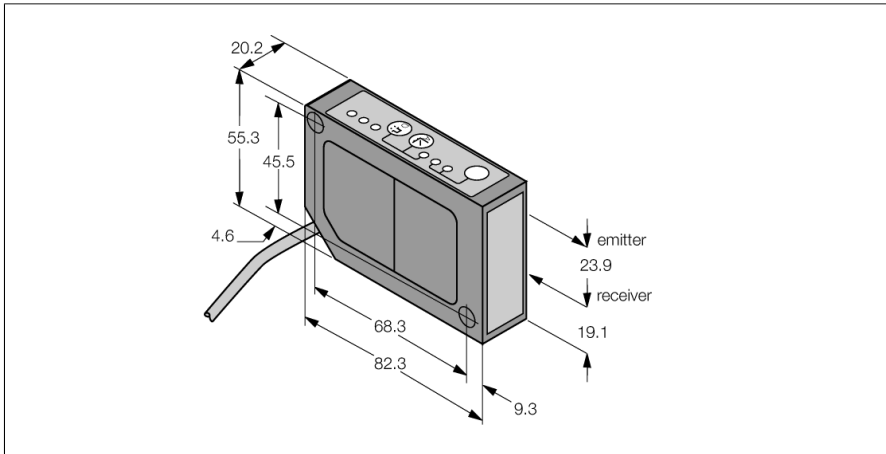
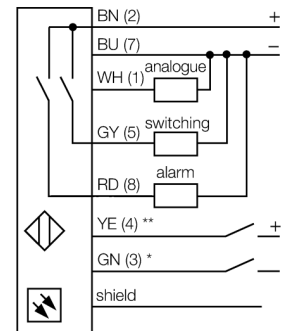


# Photoelectric Sensor Laser Measuring System LG5B65PIQ



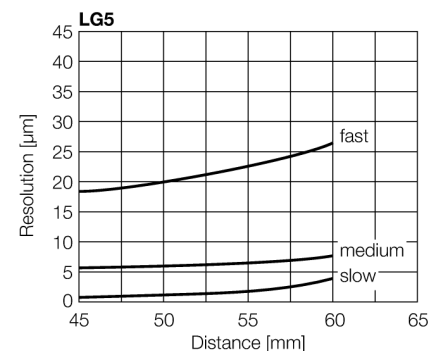
- Cable with male end M12 × 1, 8-pin, 0.15 m
- Measuring range 45...60 mm
- Focal point at 53 mm
- Operating voltage 12...30 VDC
- Analog output 4...20 mA
- Indication of signal intensity
- Alarm output
- Slow, medium and fast operation mode adjustable

### Wiring Diagram



### Functional principle

The function principle of the L-GAGE is based on optical triangulation. The emitter and the optics create a light source that is directed towards a target. The target reflects the laser beam back to the receiver lens of the sensor, from where it then falls onto the position sensitive device (PSD) as the receiving element. The target's distance from the receiver determines the angle at which the light meets the receiver element. The integrated microprocessor uses this angle to analyse the target position and to create a corresponding output signal.



|                                |  |
|--------------------------------|--|
| Type                           | LG5B65PIQ                                  |
| ID                             | 3055969                                    |
| <b>Optical data</b>            |  |
| Function                       | Proximity switch                           |
| Operating mode                 | Triangulation                              |
| Light type                     | Red  |
| Wavelength                     | 650 nm                                     |
| Focal distance                 | 53 mm                                      |
| Laser class                    | ▲ 2  |
| Repeatability                  | 0.003 mm                                   |
| Range                          | 45...60 mm                                 |
| Ambient light immunity         | 5000 lux                                   |
| <b>Electrical data</b>         |  |
| Operating voltage              | 12...30 VDC                                |
| Residual ripple                | < 10 % U <sub>ss</sub>                     |
| DC rated operational current   | ≤ 100 mA                                   |
| No-load current I <sub>0</sub> | ≤ 50 mA                                    |
| Short-circuit protection       | yes  |
| Reverse polarity protection    | yes  |
| Output function                | NO contact, PNP/Analog output              |
| Current output                 | 4...20 mA                                  |
| Load resistance                | ≤ 1000 Ω                                   |
| Switching frequency            | ≤ 500 Hz                                   |
| Readiness delay                | ≤ 1.25 s                                   |
| Readiness delay                | ≤ 1250 ms                                  |
| Response time typical          | < 1 ms                                     |
| <b>Mechanical data</b>         |  |
| Design                         | Rectangular, LG5                           |
| Housing material               | Metal, Zinc Alloy Die-Cast, Black-finished |
| Lens                           | plastic, Acrylic                           |
| Electrical connection          | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores                | 8  |
| Core cross-section             | 0.34 mm <sup>2</sup>                       |
| Ambient temperature            | -10...+50 °C                               |
| Protection class               | IP67                                       |

|                     |                           |
|---------------------|---------------------------|
| Special features    | Pushbutton<br>Teach input |
| Power-on indication | LED, Green                |
| Switching state     | LED, Yellow               |
| Tests/approvals     |                           |
| Approvals           | CE, cURus                 |

**Accessories**

| Type code | Ident no. |  | Dimension drawing |
|-----------|-----------|--|-------------------|
| SMBLG     | 3055815   | Montagewinkel, Edelstahl 304, für Sensoren der Reihe LG5 und LG10  |                   |
| SMBLGA    | 3055906   | Montagewinkel, Edelstahl 304, für Sensoren der Reihe LG5 und LG10, mit Verstellerschrauben für präzisere Montage |                   |