

M18 SENSORS WITH LASER EMISSION



- *Visible red class 1 laser emission*
- *Proximity models for high-resolution detections*
- *Retroreflex and through beam versions for long operating distances*
- *Trimmer sensitivity adjustment and stability LED*

SL5 SERIES

The **SL5** sensors, thanks to the laser emission concentrated in a thin light beam, represent the ideal solution for the detection of very small objects or to reach very long operating distances.


Precise detections with decimillimetre resolutions can be obtained with the proximity model at an operating distance ranging from 0 to 35 cm.

High operating distances can be reached with the 12 m polarised retroreflex model, or with the 60 m through beam model; high-resolution detections at shorter distances can be effected also.

The visible red emission is generated by a Class 1 laser according to the EN 60825-1, guaranteeing the maximum safety in all applications.

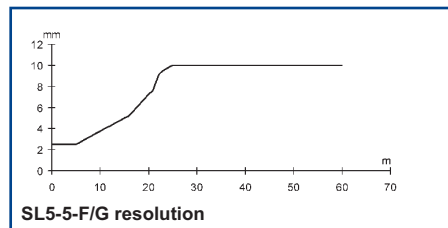
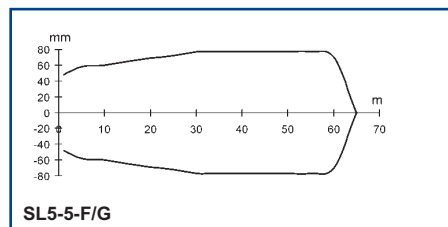
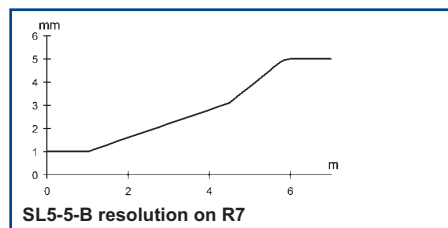
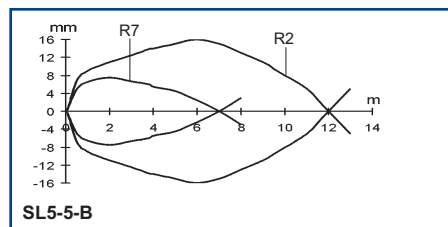
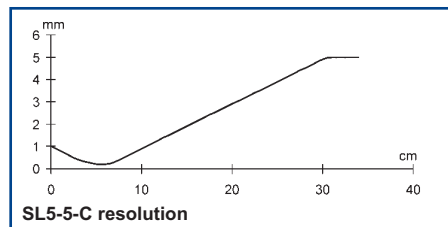
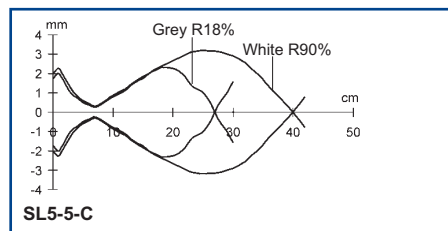
The sensitivity adjustment trimmer and the LEDs indicating the output status and switching stability are positioned on the sturdy ABS tubular M18 housing with IP67 protection.

TECHNICAL DATA

| | |
|---|--|
| Power supply: | 10 ... 30 Vdc, reverse polarity protection |
| Consumption: | 35 mA max. |
| Light emission: | red laser 650 nm |
| | safety class 1 according to EN 60825-1 |
| Diffuse proximity operating distance: | 0 ... 35 cm |
| Diffuse proximity resolution: | 0.2 mm at a distance of 5 cm |
| | 1 mm at a distance of 10 cm |
| | 3 mm at a distance of 20 cm |
| | 5 mm at distances over 30 cm |
| Polarised retroreflex operating distance: .. | 0.03 ... 12 m (on R2) |
| | 0.3 ... 7 m (on R7) |
| Polarised retroreflex resolution: | 1 mm at a distance of 1 m (on R7/R8) |
| | 2 mm at a distance of 3 m (on R7/R8) |
| | 4 mm at a distance of 5 m (on R7) |
| | 5 mm at distances over 7 m (on R2) |
| Through beam operating distance: | 0 ... 60 m |
| Through beam resolution: | 2.5 mm at a distance of 5 m |
| | 5 mm at a distance of 10 m |
| | 10 mm at distances over 20 m |
| Setting: | sensitivity trimmer |
| Indicators: | yellow OUTPUT LED |
| | green POWER LED (G. vers.) |
| | green STABILITY LED |
| Output type: | PNP, open collector |
| Saturation voltage: | 2 V max. |
| Output current: | 100 mA max., short-circuit protection |
| Response time: | 333 µs max. |
| Switching frequency: | 1.5 kHz max |
| Operating mode: | light or dark |
| Auxiliary functions: | 'test +' input (G vers.) |
| Connection: | 4-pole M12 connector |
| Electrical protection: | class 2 |
| Mechanical protection: | IP67 |
| Housing material: | ABS |
| Lens material: | PMMA plastic |
| Weight: | 30 g max. |
| Operating temperature: | -10 ... +50°C |
| Storage temperature: | -25 ... +70°C |
| Reference standard: | EN 60947-5-2, EN 60825-1 |
| Certifications: | CE  US LISTED |

The operating distances indicate the detection distance with excess gain 2.

DETECTION DIAGRAMS

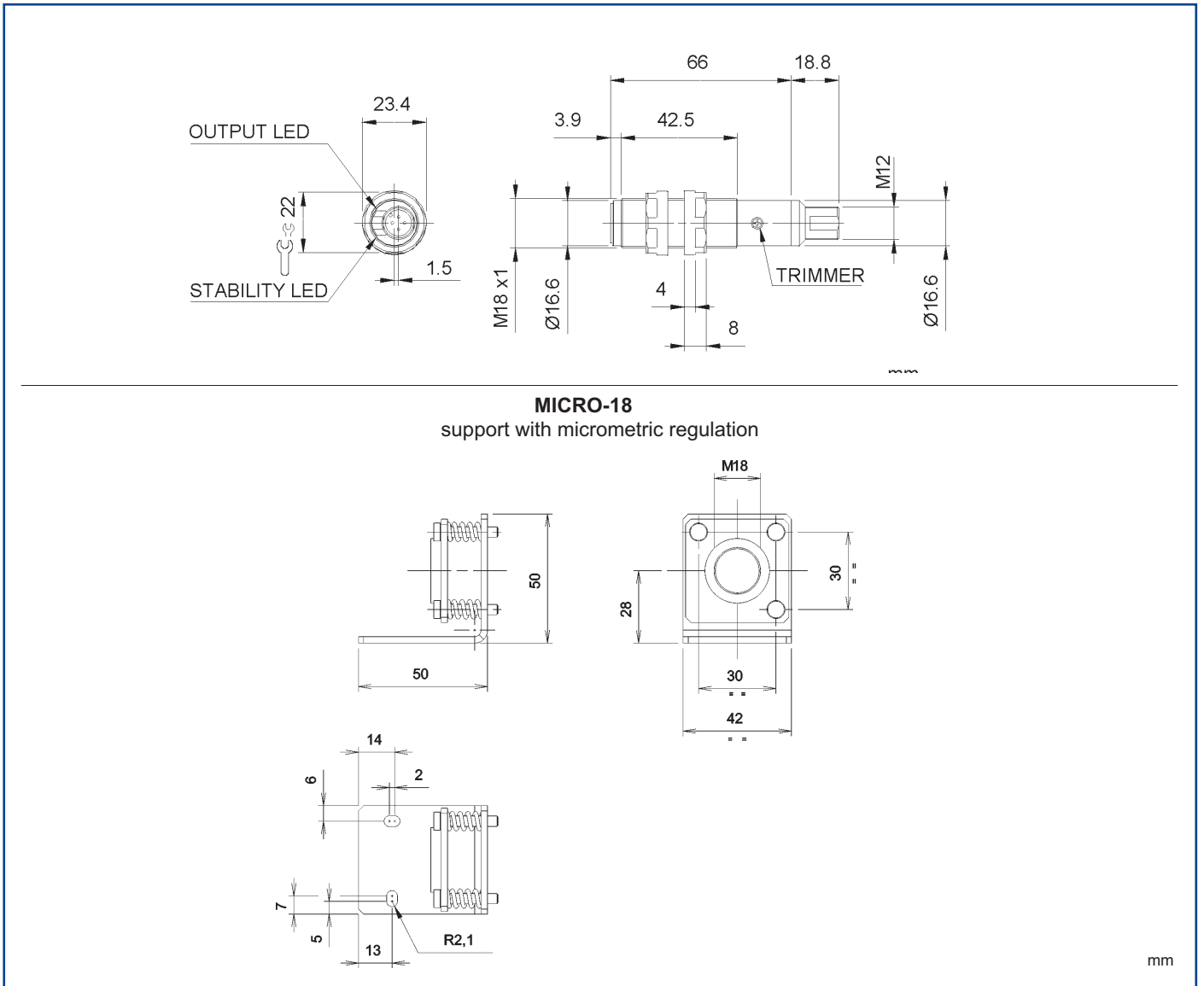


The detection diagrams indicate the typical operating distance with excess gain 1.

CONNECTIONS



DIMENSIONS



MODEL SELECTION AND ORDER INFORMATION

| MODEL | FUNCTION | CONNECTION | OUTPUT | CODE N° |
|------------|-----------------------|---------------|-----------|-----------|
| SL5-5-B-82 | polarised retroreflex | M12 connector | PNP-dark | 952501010 |
| SL5-5-B-92 | polarised retroreflex | M12 connector | PNP-light | 952501080 |
| SL5-5-C-82 | diffuse proximity | M12 connector | PNP-dark | 952501090 |
| SL5-5-C-92 | diffuse proximity | M12 connector | PNP-light | 952501000 |
| SL5-5-F-82 | receiver | M12 connector | PNP-dark | 952501020 |
| SL5-5-F-92 | receiver | M12 connector | PNP-light | 952501050 |
| SL5-5-G-82 | emitter | M12 connector | - | 952501030 |

ACCESSORY SELECTION AND ORDER INFORMATION

| MODEL | DESCRIPTION | CODE N° |
|----------|---|------------|
| R1 | Ø 23 mm prismatic reflector with Ø 31 mm support | S940700023 |
| R2 | Ø 48 mm prismatic reflector with Ø 63 mm support | S940700048 |
| R3 | 18 x 54 mm prismatic reflector with 22 x 82 mm support | S940700972 |
| R4 | 47 x 47 mm prismatic reflector with 51.5 x 61 mm support | 95A151010 |
| R5 | Ø 75 mm prismatic reflector with Ø 82 mm support | S940700075 |
| R6 | 36 x 55 mm prismatic reflector with 40.5 x 60 mm support | 95A151020 |
| R7 | 38 x 40 mm microprism reflector with 51 x 60.7 mm support | 95A151050 |
| R8 | 9.7 x 19 mm microprism reflector with 13.8 x 23 mm support | 95A151060 |
| S12 | Ø 48 mm prismatic reflector with CH.52 mm hexagon support | S940710048 |
| SP-40 | fixed support for tubular M18 sensors | 95ACC1370 |
| SWING-18 | adjustable support for tubular M18 sensors | 895000006 |
| MICRO-18 | support with micrometric regulation for tubular M18 sensors | 95ACC1380 |

Please refer also to **Sensor Accessories**

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HEADQUARTERS

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