

MINIATURE SENSORS

S41

Basic line of miniature European style photoelectric sensors

- Cost-effective universal models with adjustment trimmer
- Polarized retroreflective for transparent objects
- 4-wire connection NO/NC output or Remote teach



APPLICATIONS

- Processing and Packaging machinery
- Conveyor lines, material handling
- Automated warehousing



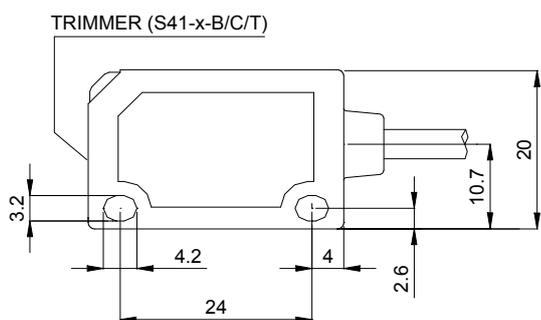
| S41 | | |
|---|-----------|--------------|
| Through beam | | 0,1...6 m |
| Polarized retroreflective (on R2 reflector) | | 0,1...2,5 m |
| Retroreflective for transparent (on R2 reflector) | | 100...700 mm |
| Diffuse proximity | | 2...350 mm |
| Fixed focus | | 110 mm |
| Power supply | Vdc | 10...30 V |
| | Vac | |
| | Vac/dc | |
| Output | PNP | ▪ |
| | NPN | ▪ |
| | NPN/PNP | |
| | relay | |
| | other | |
| Connection | cable | ▪ |
| | connector | ▪ |
| | pig-tail | |
| Approximate dimensions (mm) | | 12x32x20 |
| Housing material | | ABS |
| Mechanical protection | | IP67 |

TECHNICAL DATA

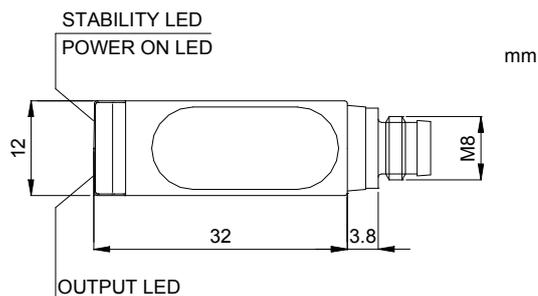
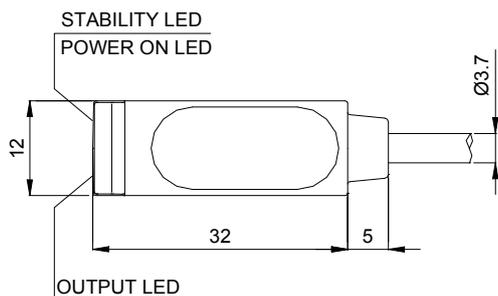
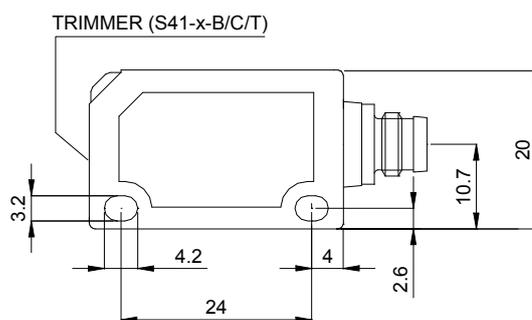
| | |
|---------------------------------------|---|
| Power supply | 10 ... 30 Vdc (reverse polarity protection) |
| Ripple | 10% max. |
| Consumption (output current excluded) | 35 mA max. |
| Light emission | red LED 660 nm (mod. S41...B/D/P/T) IR LED 880 nm (mod. S41...C/G/H) |
| Setting | sensitivity trimmer (mod. S41...B/C/T) |
| Operating mode | LIGHT mode (mod. S41...C/D); DARK mode (mod. S41...B/F/P/T) |
| Indicators | yellow OUTPUT LED green STABILITY LED (mod. S41...B/D/C/F/P), POWER LED (mod. S41...G/H) |
| Output | NPN or PNP, NO; NC |
| Output current | 100 mA max. |
| Saturation voltage | 2 V max. |
| Response time | 1 ms |
| Switching frequency | 500 Hz max. |
| Connection | M8 4-pole connector, 2 m cable Ø 3,5 mm |
| Dielectric strength | 500 Vac, 1 min between electronics and housing |
| Insulating resistance | >20 MΩ, 500 Vdc between electronics and housing |
| Electrical protection | class 2 |
| Mechanical protection | IP66 (mod. S41...B/C/T), IP67 (mod. S41...D/F/G/P/H) |
| Ambient light rejection | according to EN 60947-5-2 |
| Vibrations | 0,5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6) |
| Shock resistance | 11 ms (30 G) 6 shock for every axis (EN60068-2-27) |
| Housing material | ABS UL 94V-0 |
| Lens material | PMMA plastic |
| Operating temperature | -25 ... +55 °C |
| Storage temperature | -25 ... +70 °C |
| Weight | 40 g max. cable vers., 10 g max. conn. vers. |

DIMENSIONS

CABLE VERSION



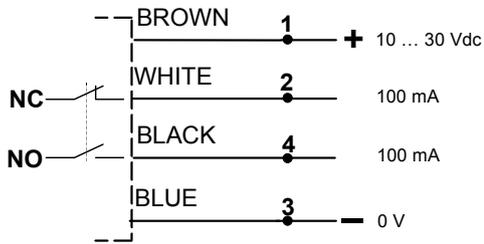
M8 CONNECTOR VERSION



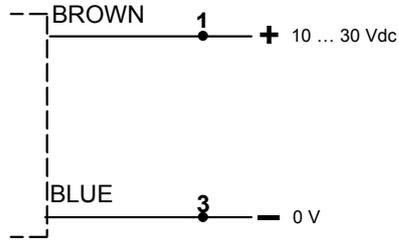
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CONNECTIONS

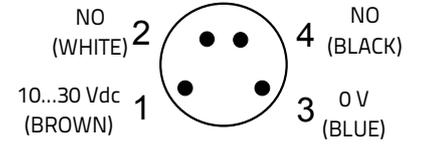
CABLE



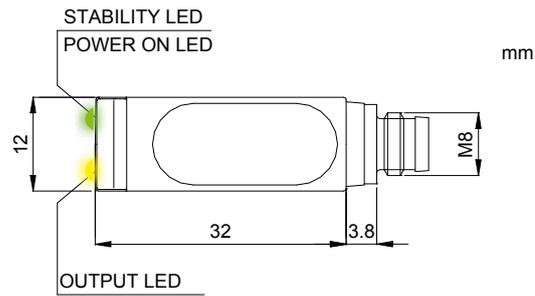
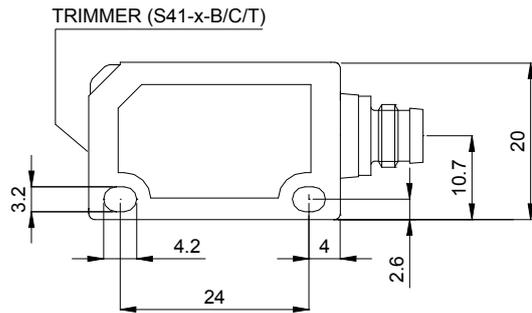
Through beam emitter



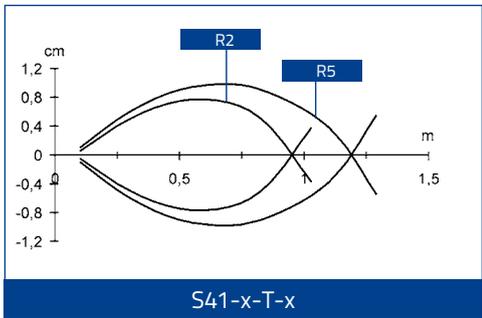
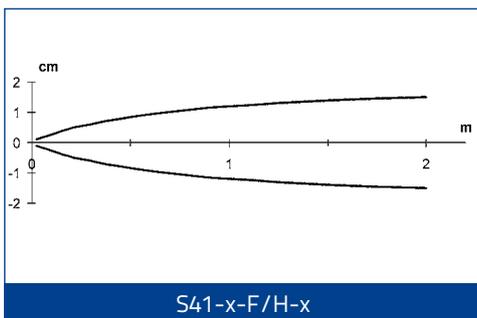
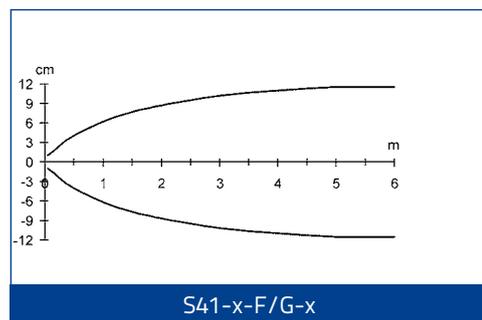
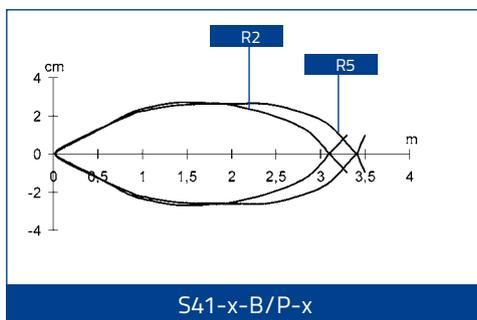
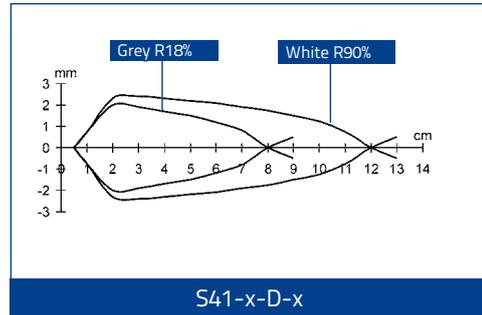
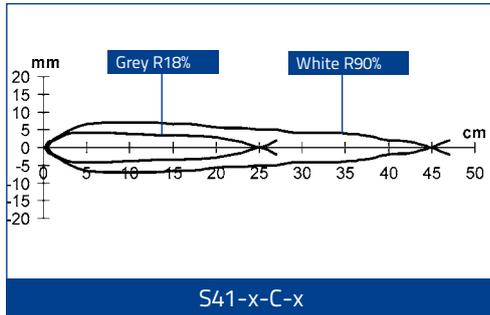
M8 CONNECTOR



INDICATORS AND SETTINGS



DETECTION DIAGRAMS



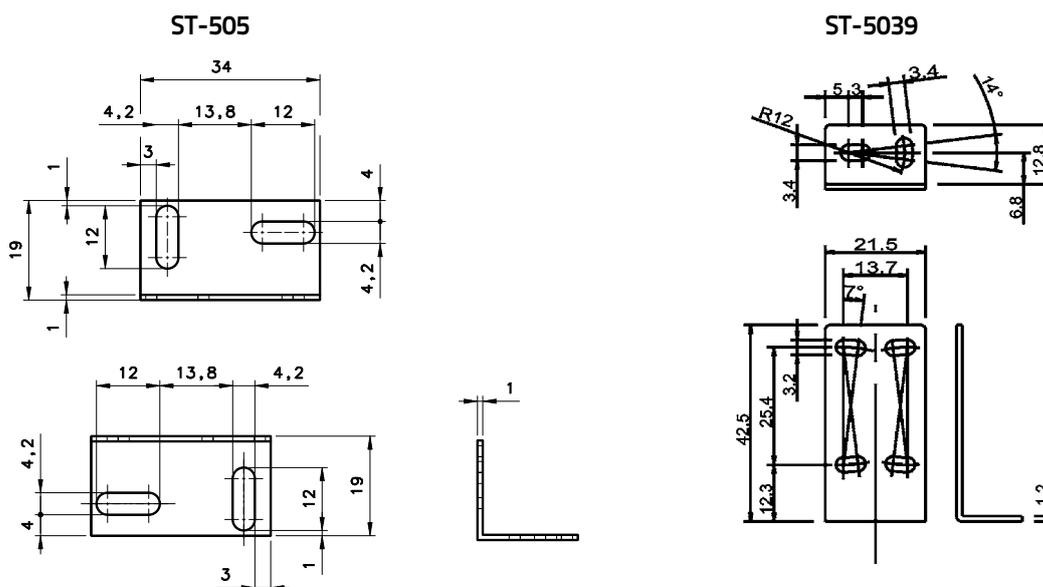
The detection diagrams indicate the typical operating distance with excess gain 1.

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MODEL SELECTION AND ORDER INFORMATION

| OPTIC FUNCTION | ADJUSTMENT TRIMMER | CONNECTION | OUTPUT | MODEL | ORDER No. |
|---------------------------------------|--------------------|--------------|--------|-----------|-----------|
| Polarized retroreflective | Present | 2m Cable | NPN | S41-2-B-N | 950701150 |
| | | | PNP | S41-2-B-P | 950701000 |
| | | M8 Connector | NPN | S41-5-B-N | 950701210 |
| | | | PNP | S41-5-B-P | 950701050 |
| Polarized retroreflective | Absent | 2m Cable | NPN | S41-2-P-N | 950701190 |
| | | | PNP | S41-2-P-P | 950701100 |
| | | Connector | NPN | S41-5-P-N | 950701250 |
| | | | PNP | S41-5-P-P | 950701110 |
| Diffuse proximity | Present | 2m Cable | NPN | S41-2-C-N | 950701160 |
| | | | PNP | S41-2-C-P | 950701010 |
| | | M8 Connector | NPN | S41-5-C-N | 950701120 |
| | | | PNP | S41-5-C-P | 950701060 |
| Fixed focus | Absent | 2m Cable | NPN | S41-2-D-N | 950701170 |
| | | | PNP | S41-2-D-P | 950701020 |
| | | M8 Connector | NPN | S41-5-D-N | 950701230 |
| | | | PNP | S41-5-D-P | 950701070 |
| Through beam receiver | Absent | 2m Cable | NPN | S41-2-F-N | 950701180 |
| | | | PNP | S41-2-F-P | 950701030 |
| | | M8 Connector | NPN | S41-5-F-N | 950701240 |
| | | | PNP | S41-5-F-P | 950701080 |
| Through beam emitter | Absent | 2m Cable | - | S41-2-G | 950701040 |
| Through beam emitter with narrow beam | Absent | M8 Connector | - | S41-5-G | 950701090 |
| | | M8 Connector | - | S41-2-H | 950701045 |
| Retroreflective for transparent | Present | 2m Cable | NPN | S41-2-T-N | 950701200 |
| | | | PNP | S41-2-T-P | 950701130 |
| | | M8 Connector | NPN | S41-5-T-N | 950701260 |
| | | | PNP | S41-5-T-P | 950701140 |

ACCESSORIES



| MODEL | DESCRIPTION | ORDER NO. |
|---------|-------------------------|-----------|
| ST-505 | lateral mounting | 95ACC2800 |
| ST-5039 | L-shaped fixing bracket | 95ACC2270 |

CABLES

| TYPE | DESCRIPTION | LENGTH | MODEL | ORDER No. |
|---------------------|----------------------|--------|---------------|-----------|
| Axial M8 Connector | 4-pole, grey, P.V.C. | 3 m | CS-B1-02-G-03 | 95A251420 |
| | | 5 m | CS-B1-02-G-05 | 95A251430 |
| | | 7 m | CS-B1-02-G-07 | 95A251440 |
| | | 10 m | CS-B1-02-G-10 | 95A251480 |
| | 4-pole, P.U.R. | 2 m | CS-B1-02-R-02 | 95A251620 |
| | | 5 m | CS-B1-02-R-05 | 95A251640 |
| Radial M8 Connector | 4-pole, grey, P.V.C. | 3 m | CS-B2-02-G-03 | 95A251450 |
| | | 5 m | CS-B2-02-G-05 | 95A251460 |
| | | 7 m | CS-B2-02-G-07 | 95A251470 |
| | | 10 m | CS-B2-02-G-10 | 95A251530 |
| | 4-pole, P.U.R. | 2 m | CS-B2-02-R-02 | 95A251630 |
| | | 5 m | CS-B2-02-R-05 | 95A251650 |