

TUBULAR SENSORS

S50/S51

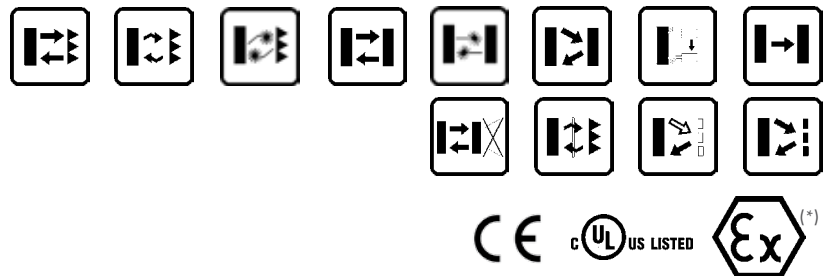
Extended range of standard "One for All" photoelectric tubular M18 sensors

- All optic functions and LASER models
- M18 flat plastic with universal mounting
- Available in M18 metal housing
- Axial or radial optics, cable or connector
- Standard 4-wire NO-NC NPN or PNP output



APPLICATIONS

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



(*) Axial models.
ATEX II 3DG

| S50/S51 | | |
|---|-----------|--|
| Through beam | | 0...20 m 0...60 m (class 1 LASER) (S50) |
| Retroreflective (on R2 reflector) | | 0,1...4 m |
| Polarized retroreflective | | 0,1...4 m (S50) 0,1...3 m (S51) 0,1...16 m (class 1 LASER) (S50) |
| Retroreflective for transparent (on R2 reflector) | | 0,1...1,3 m (S50) |
| Diffuse proximity | | short distance 0...100 mm medium distance 0...400 mm (S50) 0...450 mm (S51) long distance 0...700 mm long distance LASER 0...350 mm |
| Fixed focus | | 100 mm (S50) |
| Background suppression | | 50...100 mm (S50) |
| Through beam with fiber optic | | 0...100 mm (S50) |
| Diffuse proximity with fiber optic | | 0...30 mm (S50) |
| Contrast sensor | | 10 ±2 mm |
| Luminescence sensor | | 0...20 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) | | M18x 55/68 |
| Housing material | | PBT, nickel plated brass |
| Mechanical protection | | IP67 |

TECHNICAL DATA

| | |
|---------------------------------------|--|
| Power supply | 10 ... 30 Vdc (limit values) |
| Ripple | 2 Vpp max. |
| Consumption (output current excluded) | 35 mA max. (mod. S50...A00/B01/C01/C10/C21/D00/E01/T01) 30 mA max. (mod. S50...F01/M03, S51...A00/B01/C01/C10/C20/F00) 25 mA max. (mod. S50...W03/U03) |
| Light emission | red LED 630 nm (mod. S50...D00/E01, S50-PA/MA...M03) red LED 660 nm (mod. S50...B01/T01, S51...B01) red LED 670 nm (mod. S50-PS/MS...M03) IR LED 880 nm (mod. S50/51...A00/C01/C10/C20/C21/G00) white LED 400-700 nm (mod. S50...W03) UV LED 370 nm (mod. S50...U03) red Laser 650 nm (mod. S50...G00/F01/B01/C01) |
| Setting | sensitivity trimmer (mod. B01/C01/C21/E01/F01/T01) teach-in push-button (mod. M03/W03/U03) |
| Operating mode | LIGHT mode on N.O. output / DARK mode on N.C. output (mod.S50...C01/C10/C21/D00/M03/U03) DARK mode on N.O. output / LIGHT mode on N.C. output (mod.S50...A00/B01/E01/F01/T01/W03) white wire or pin 2 connected to +10...30V LIGHT mode/ to 0V DARK mode (mod. S51) white wire or pin 2 not connected LIGHT mode (mod. S51...C01/C10/C20)/ DARK mode (mod. S51...A00/B01/F00) |
| Indicators | yellow OUTPUT LED (S50, S51, excl. mod. G00) green STABILITY LED (mod. S50...B01/C01/C21/E01/F01), POWER LED (mod. S50...G00, S51) green/red READY/ERROR LED (mod. S50...M03/W03/U03) |
| Output | PNP or NPN; NO; NC (mod. S50) |
| Output current | 100 mA max. |
| Saturation voltage | 2 V max. |
| Response time | 0,5 ms (mod. S50...A00/B01/T01/C10/C21/C01/D00/E01/U03) 2 ms (mod. S50...F01/G00) 1 ms (mod. S50...M03, S51...A00/B01/C01/C10/G00) 4 ms (mod. S51...F00) 100 µs (mod. S50...W03) 333 µs (Laser mod. S50) |
| Switching frequency | 1 kHz (mod. S50...A00/B01/T01/C10/C21/C01/D00/E01/U03) 250 Hz (mod. S50...F01/G00) 500 Hz (mod. S50...M03, S51...A00/B01/C01/C10/G00) 120 Hz (mod. S51...F00) 5 kHz (mod. S50...W03) 1,5 kHz (Laser mod. S50) |
| Connection | 2 m cable Ø 4 mm, M12 4-pole connector |
| 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 | IP67 |
| 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 | Plastic version PBT Metal version nickel plated brass |
| Lens material | PMMA |
| Operating temperature | -25 ... 55 °C (Laser mod.) -10 ... 50 °C |
| Storage temperature | -25 ... 70 °C |
| Weight | Plastic version 75 g max. cable vers. (90 g max. mod. M03), 25 g max. conn. vers. (40 g max. mod. M03) Metal version 110 g max. cable vers. (125 g max. mod. M03), 60 g max. conn. vers. (75 g max. mod. M03) |

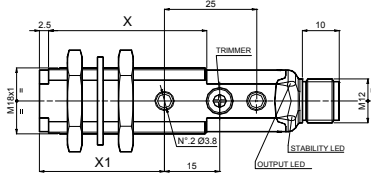
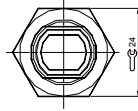
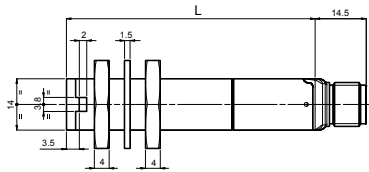
TUBULAR SENSORS

S50

DIMENSIONS

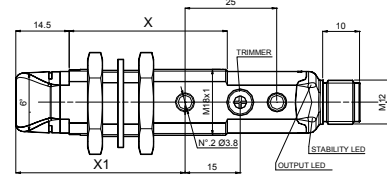
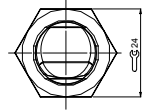
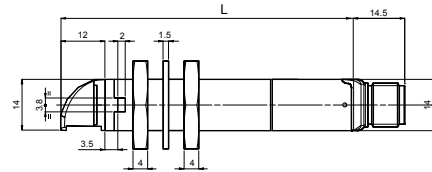
PLASTIC

AXIAL VERSION



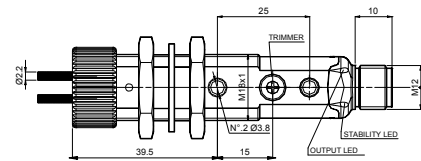
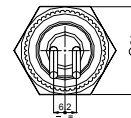
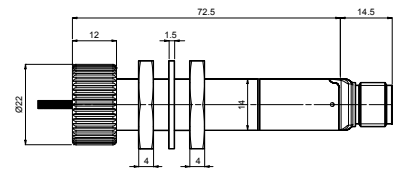
| | MODELS | |
|----|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 67 | 57 |
| X | 43 | 42 |
| X1 | 34 | 24 |

RADIAL VERSION



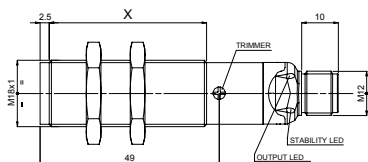
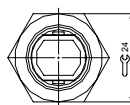
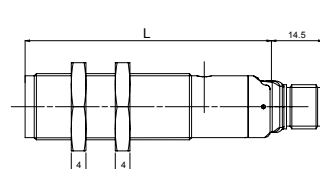
| | MODELS | |
|----|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 79 | 69 |
| X | 43 | 42 |
| X1 | 46 | 36 |

FIBRE OPTIC VERSION



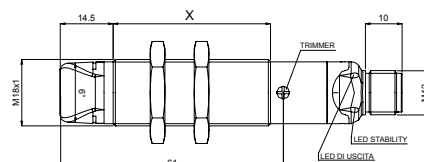
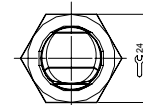
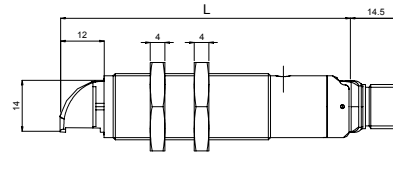
METAL

AXIAL VERSION



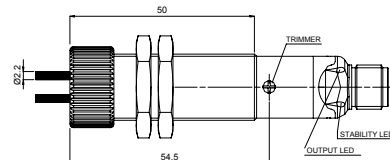
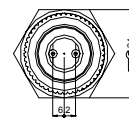
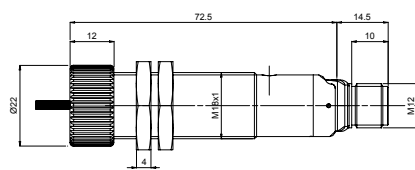
| | MODELS | |
|---|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 67 | 57 |
| X | 43 | 38 |

RADIAL VERSION



| | MODELS | |
|---|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 79 | 69 |
| X | 43 | 38 |

FIBRE OPTIC VERSION



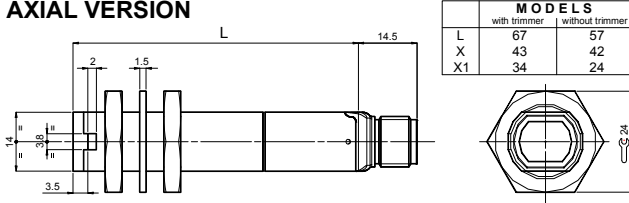
TUBULAR SENSORS

S51

DIMENSIONS

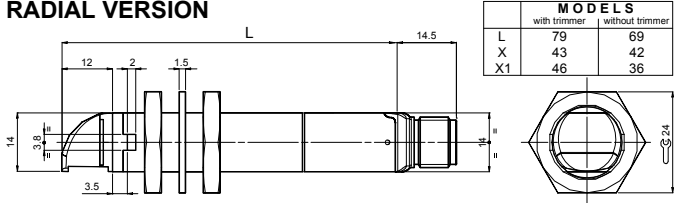
PLASTIC

AXIAL VERSION

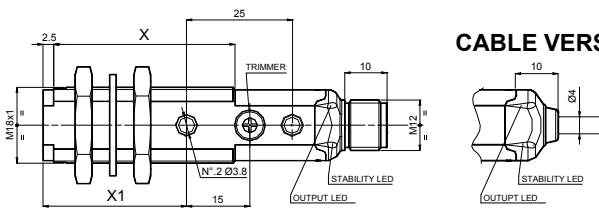


| MODELS | | |
|--------|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 67 | 57 |
| X | 43 | 42 |
| X1 | 34 | 24 |

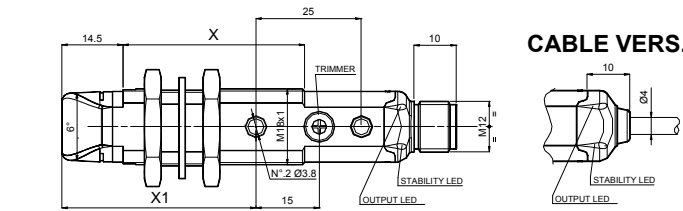
RADIAL VERSION



| MODELS | | |
|--------|--------------|-----------------|
| | with trimmer | without trimmer |
| L | 79 | 69 |
| X | 43 | 42 |
| X1 | 46 | 36 |

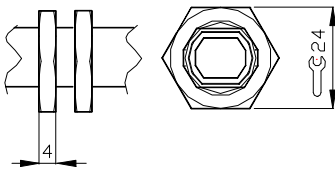


CABLE VERS.

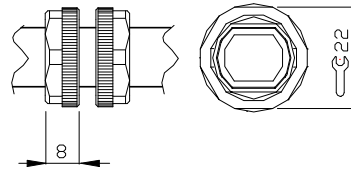


CABLE VERS.

CH.24 PLASTIC NUTS

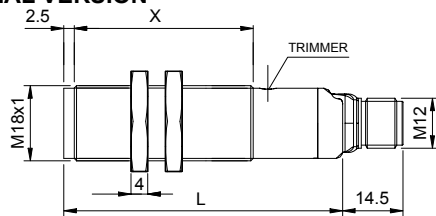


CH.22 PLASTIC NUTS



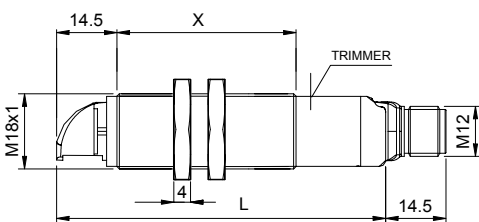
METAL

AXIAL VERSION



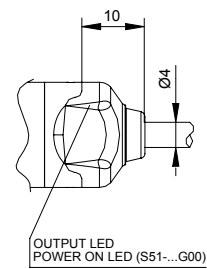
| MODELS | | |
|--------|-------------|-------------|
| | B01/C01/F00 | A00/C10/G00 |
| L | 67 | 57 |
| X | 43 | 38 |

RADIAL VERSION



| MODELS | | |
|--------|-------------|-------------|
| | B01/C01/F00 | A00/C10/G00 |
| L | 79 | 69 |
| X | 43 | 38 |

CABLE VERSION



CONNECTIONS

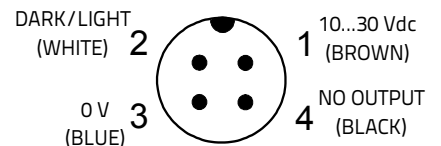
CABLE

| | | | |
|-------|---|---|----------------|
| BROWN | 1 | + | 10 ... 30 Vdc |
| WHITE | 2 | | DARK- / LIGHT+ |
| BLACK | 4 | | N.O. OUTPUT |
| BLUE | 3 | - | 0 V |

Through beam emitter

| | | | |
|-------|---|---|---------------|
| BROWN | 1 | + | 10 ... 30 Vdc |
| WHITE | 2 | | TEST + |
| BLACK | 4 | | TEST - |
| BLUE | 3 | - | 0 V |

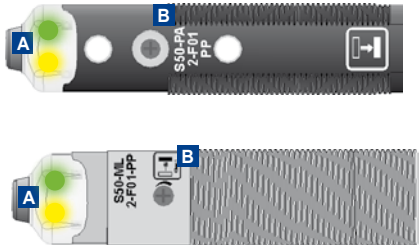
M12 CONNECTOR



S50/S51

INDICATORS AND SETTINGS

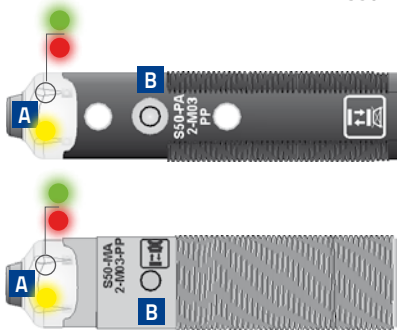
S50-XX...A00/B01/C01/C21/E01/F01/T01
S51-XX...B01/C01



- A** OUTPUT status LED Yellow
STABILITY LED Green (Only Receiver)
POWER ON LED Green (Only Emitter)
- B** Adjustment trimmer (receiver)

Single-turn trimmer for sensitivity adjustment. Rotate in a clockwise direction to increase the operating distance.

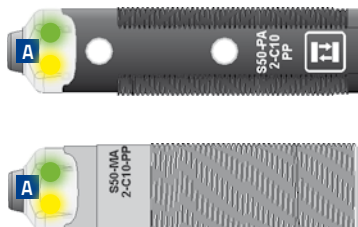
S50-XX-M03/W03/U03



- A** OUTPUT status LED Yellow
READY LED Green
ERROR LED Red
- B** Teach-in push-button

Teach-in button for setting.
EASYtouch™ provides two setting modes: standard or fine, both obtained by pressing the push-button only once.
Please refer to instructions manual for operating details.

S50-XX-C10
S51-XX-A00/C10/C20/F00/G00

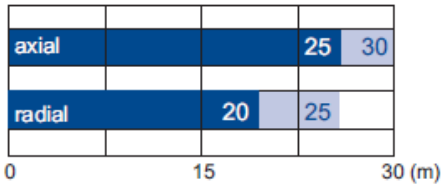


- A** A00/C10/C20/F00
OUTPUT status LED Yellow
STABILITY LED green
- G00
OUTPUT status LED yellow (Only Emitter G00)

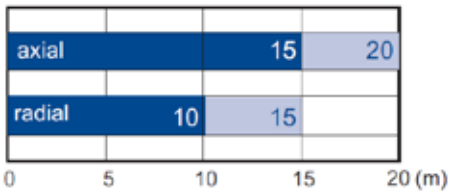
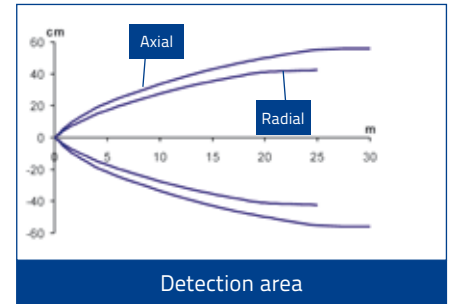
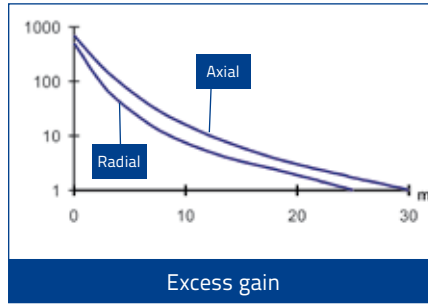
TUBULAR SENSORS

S50 DETECTION DIAGRAMS

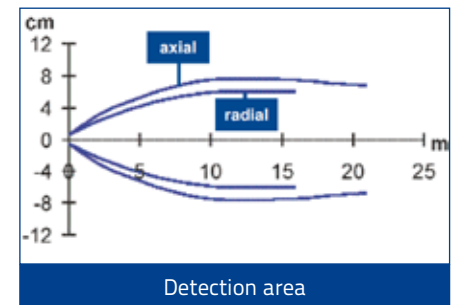
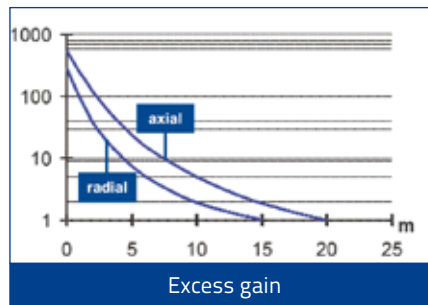
G/F INFRARED EMISSION



■ Recommended operating distance
■ Maximum operating distance



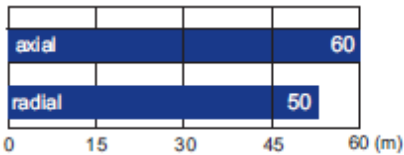
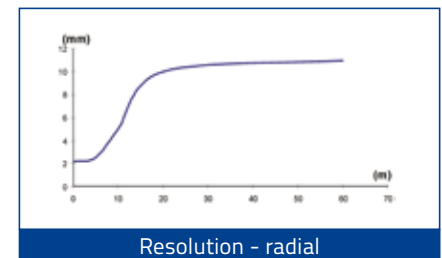
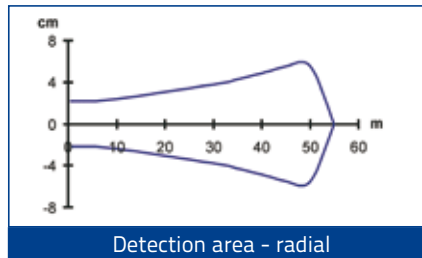
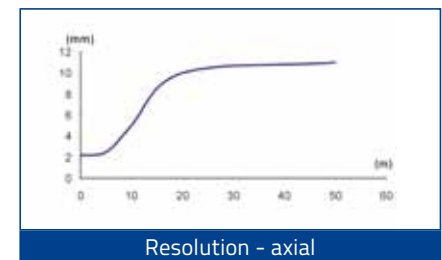
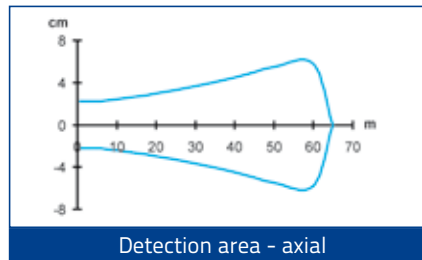
■ Recommended operating distance
■ Maximum operating distance



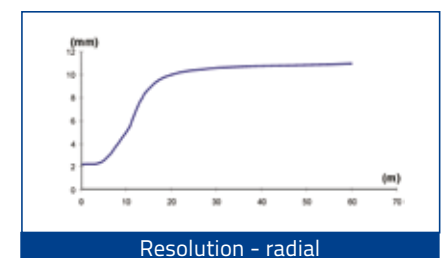
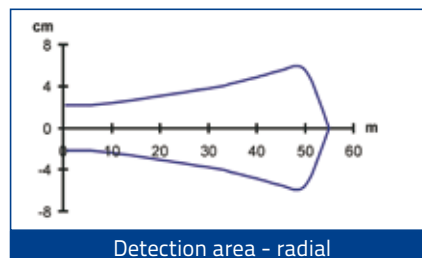
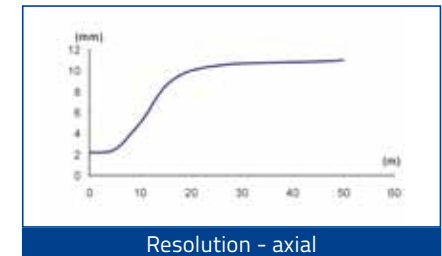
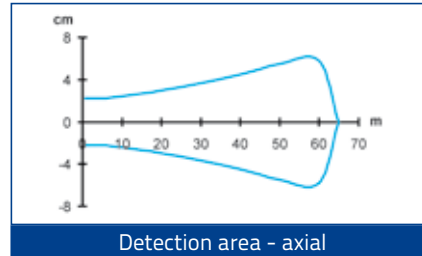
G/F LASER RED EMISSION



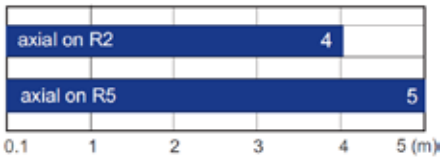
■ Operating distance



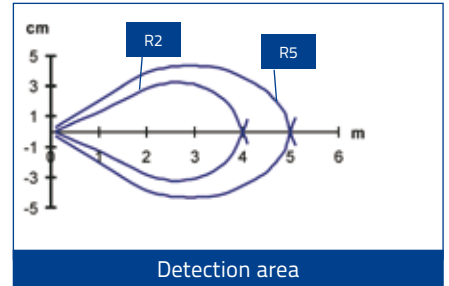
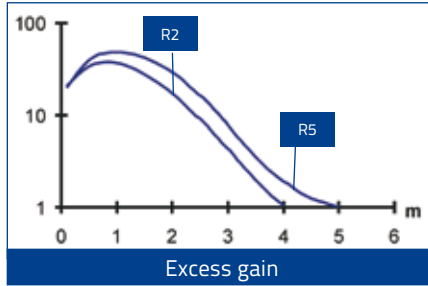
■ Operating distance



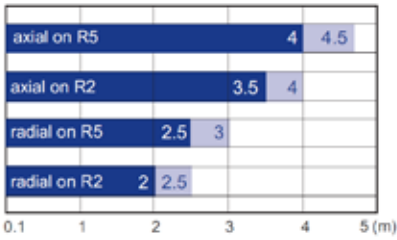
A INFRARED EMISSION



Operating distance

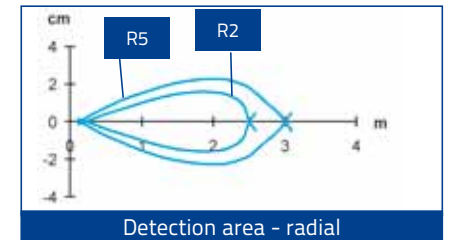
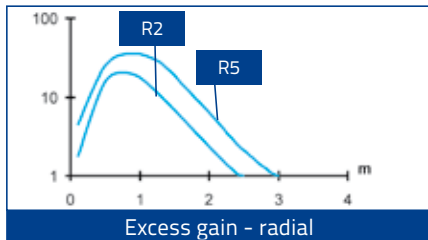
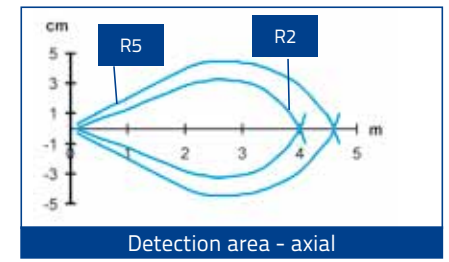
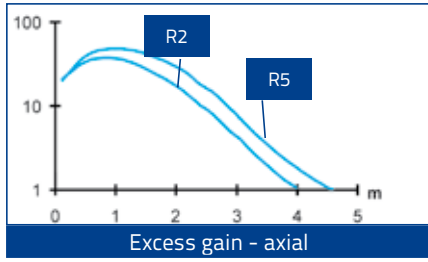


B INFRARED EMISSION

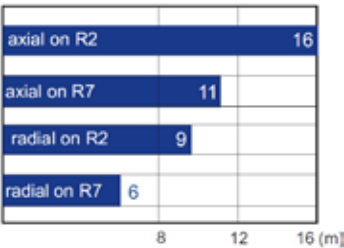


Recommended operating distance
Maximum operating distance

High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors (A.01)**.

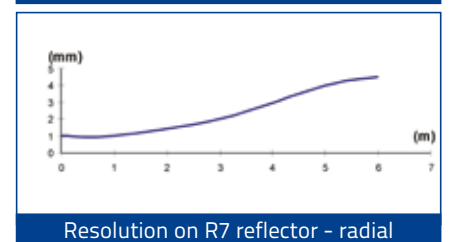
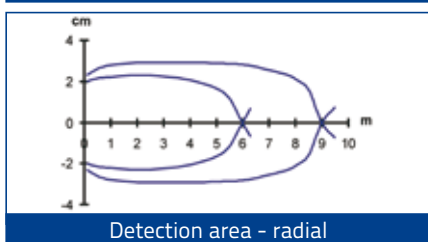
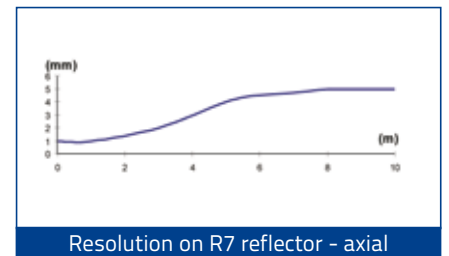
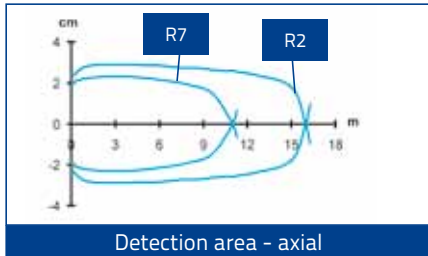


B LASER RED EMISSION

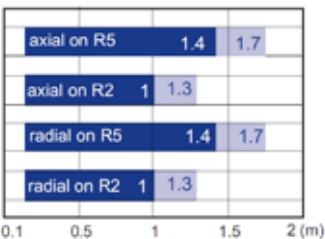


Operating distance

High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors (A.01)**.

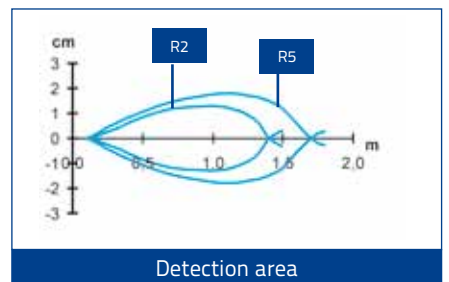
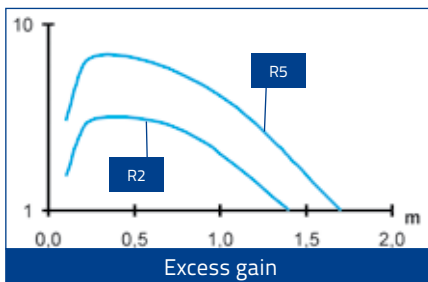


T RED EMISSION



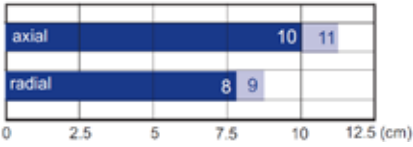
Recommended operating distance
Maximum operating distance

High efficiency reflectors can be used to obtain larger operating distances. Refer to **Reflectors**.

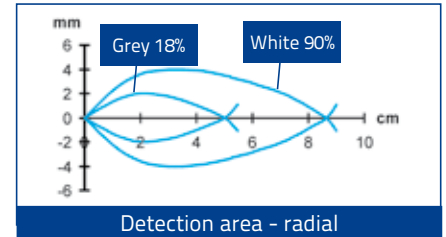
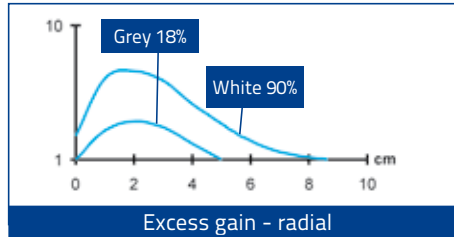
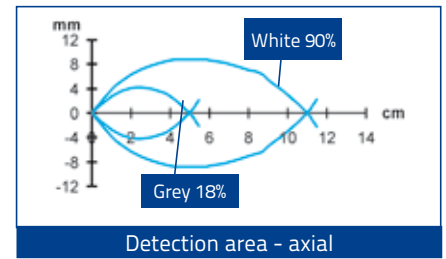
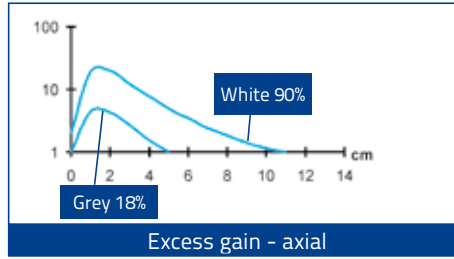


TUBULAR SENSORS

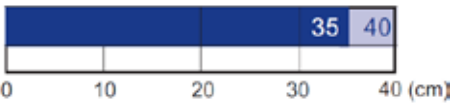
C SHORT INFRARED EMISSION



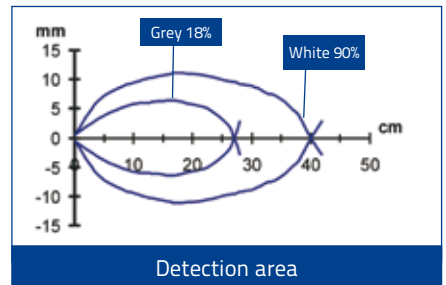
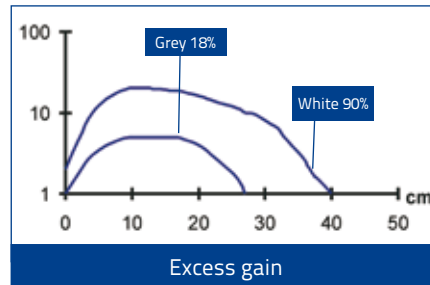
- Recommended operating distance
- Maximum operating distance



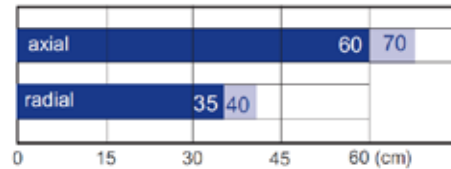
C MID INFRARED EMISSION



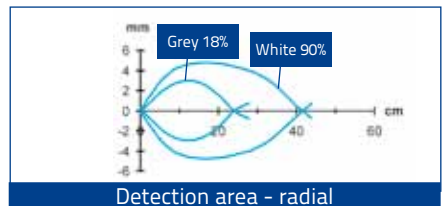
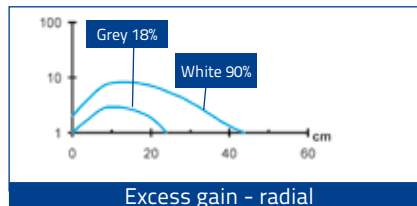
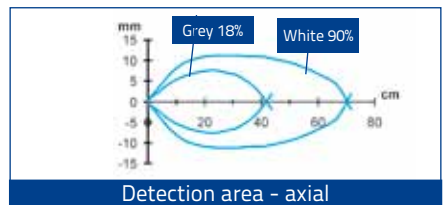
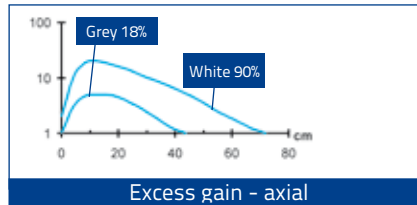
- Recommended operating distance
- Maximum operating distance



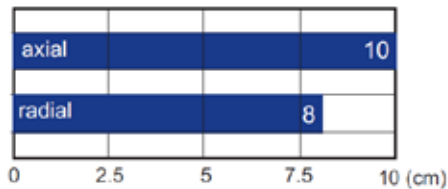
C LONG INFRARED EMISSION



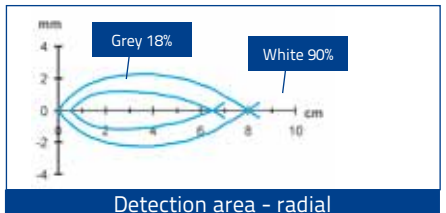
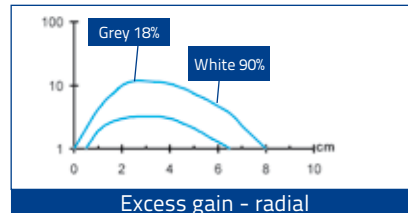
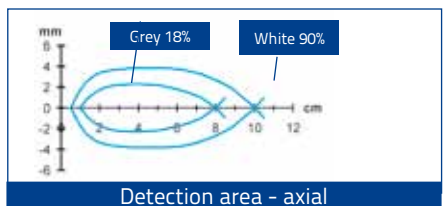
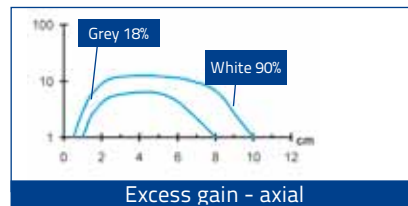
- Recommended operating distance
- Maximum operating distance



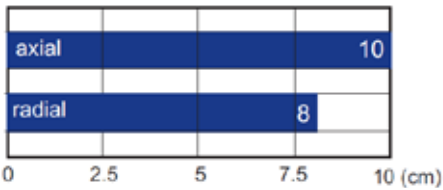
D RED EMISSION



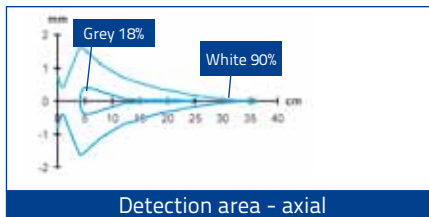
- Operating distance



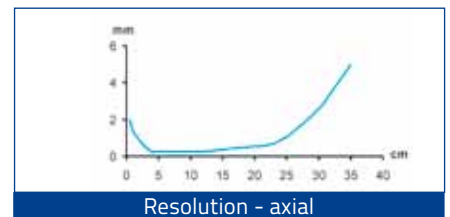
C LASER RED EMISSION



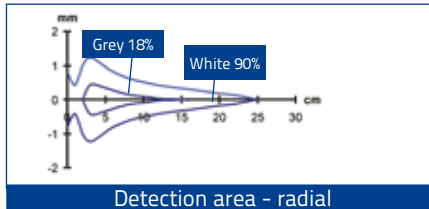
■ Operating distance



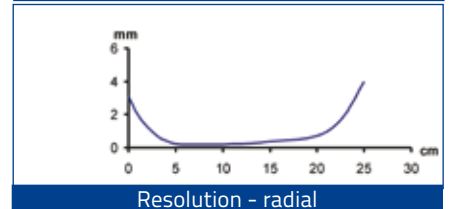
Detection area - axial



Resolution - axial

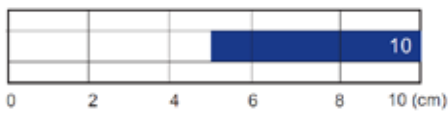


Detection area - radial

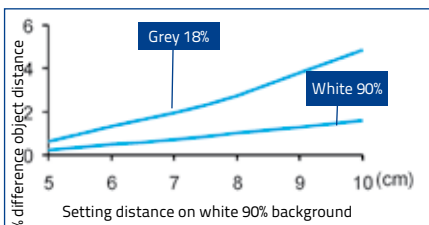


Resolution - radial

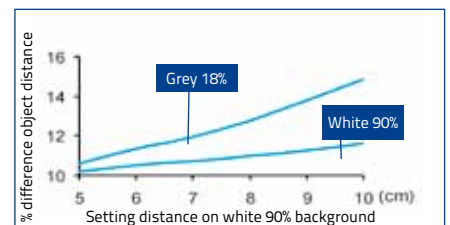
M AXIAL RED EMISSION



■ Operating distance

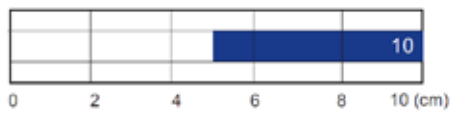


Detection difference with EASYtouch™ acquisition

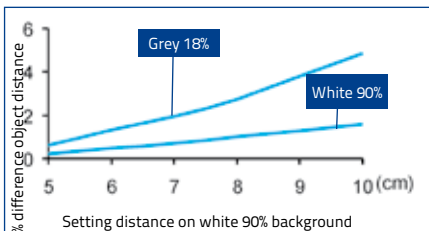


Detection difference with fine acquisition

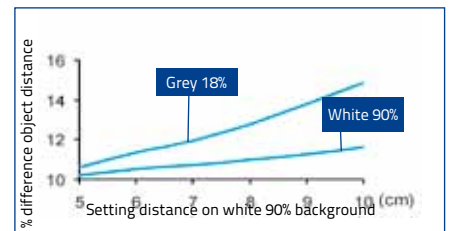
M RADIAL RED EMISSION



■ Operating distance

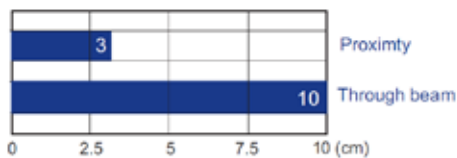


Detection difference with EASYtouch™ acquisition



Detection difference with fine acquisition

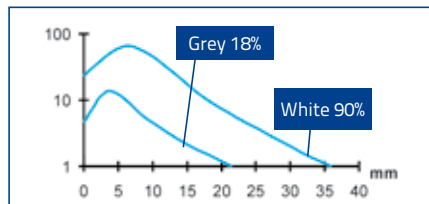
E RED EMISSION



■ Operating distance with standard fibers

Standard Fiber-optics:
OF-42-ST-20 proximity
OF-43-ST-20 through beam

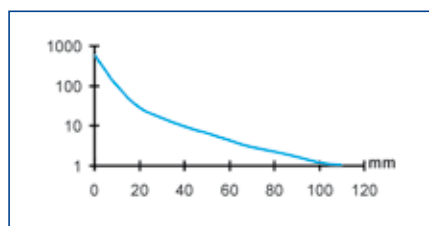
High efficiency fiber-optics or accessory lenses can be used to obtain larger operating distances. Refer to **Fiber-optics** of the **General Catalogue**



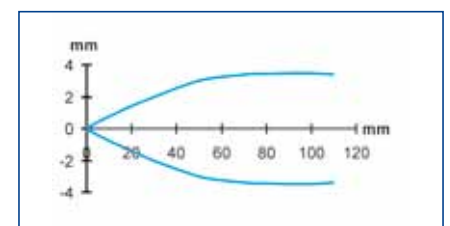
Excess gain - proximity *



Detection area - proximity *



Excess gain - through beam *

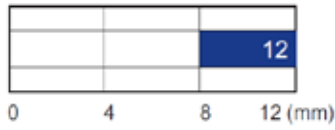


Detection area - through beam *

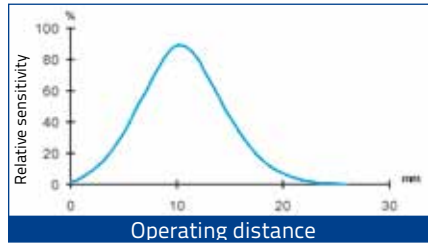
* standard Fiber-optics

TUBULAR SENSORS

W WHITE EMISSION



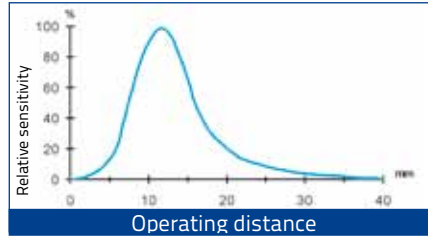
Operating distance



U UV EMISSION

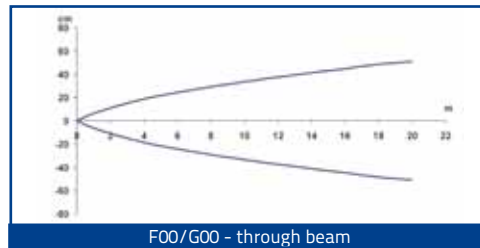
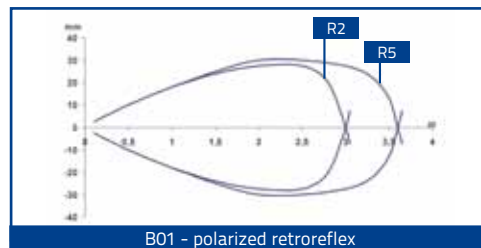
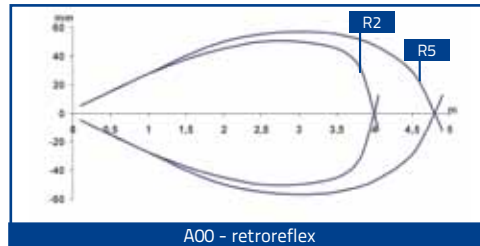
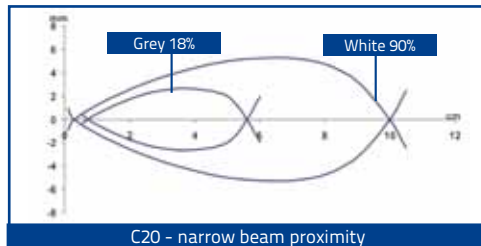
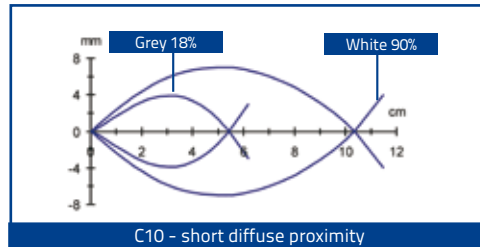
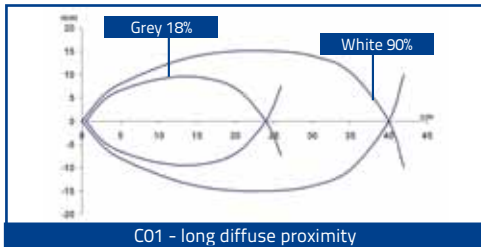


Operating distance



S51 DETECTION DIAGRAMS

M18 STANDARD



Note: the diagrams indicate the detection area typical of the axial optic versions; the maximum operating distance of the radial optic versions decreases as indicated in the tables given below

| | | |
|--------------|-----|-----|
| A00 | 3,5 | 4 |
| Actual on R2 | | |
| A00 | 4 | 4,5 |
| Actual on R3 | | |
| A00 | 2,5 | 3 |
| Radial on R2 | | |
| A00 | 3 | 3,5 |
| Radial on R3 | | |

| | | |
|--------------|-----|-----|
| B01 | 2,5 | 3 |
| Actual on R2 | | |
| B01 | 3 | 3,5 |
| Actual on R3 | | |
| B01 | 2 | 2,5 |
| Radial on R2 | | |
| B01 | 2,5 | 3 |
| Radial on R3 | | |

| | | |
|--------|----|----|
| F/G | 18 | 20 |
| Actual | | |
| F/G | 15 | 18 |
| Radial | | |

| | | |
|--------|----|----|
| C01 | 40 | 55 |
| Actual | | |
| C01 | 30 | 35 |
| Radial | | |

| | |
|---------|----|
| C10/C20 | 10 |
| Actual | |
| C10 | 8 |
| Radial | |

Recommended operating distance
Maximum operating distance

MODEL SELECTION AND ORDER INFORMATION

| S50 PLASTIC MODELS | | | | | | |
|---------------------------|---------------------|------------------|-----------------|-----------------|-----------------|-----------|
| OPTIC FUNCTION | EMISSION | CONNECTION | OUTPUT | MODEL | ORDER No. | |
| Retroreflective | LED, Axial optic | 2m Cable | NPN | S50-PA-2-A00-NN | 952002090 | |
| | | | PNP | S50-PA-2-A00-PP | 952002080 | |
| | | M12 Connector | NPN | S50-PA-5-A00-NN | 952002110 | |
| | | | PNP | S50-PA-5-A00-PP | 952002100 | |
| Polarized retroreflective | LED, Axial optic | 2m Cable | NPN | S50-PA-2-B01-NN | 952001610 | |
| | | | PNP | S50-PA-2-B01-PP | 952001010 | |
| | | M12 Connector | NPN | S50-PA-5-B01-NN | 952001500 | |
| | | | PNP | S50-PA-5-B01-PP | 952001020 | |
| | LED, Radial optic | 2m Cable | NPN | S50-PR-2-B01-NN | 952001780 | |
| | | | PNP | S50-PR-2-B01-PP | 952001030 | |
| | | M12 Connector | NPN | S50-PR-5-B01-NN | 952001720 | |
| | | | PNP | S50-PR-5-B01-PP | 952001040 | |
| | LASER, Axial optic | 2m Cable | NPN | S50-PL-2-B01-NN | 952001870 | |
| | | | PNP | S50-PL-2-B01-PP | 952001360 | |
| | | M12 Connector | NPN | S50-PL-5-B01-NN | 952001840 | |
| | | | PNP | S50-PL-5-B01-PP | 952001370 | |
| LASER, Radial optic | 2m Cable | NPN | S50-PH-2-B01-NN | 952001950 | | |
| | | PNP | S50-PH-2-B01-PP | 952001940 | | |
| | M12 Connector | NPN | S50-PH-5-B01-NN | 952001970 | | |
| | | PNP | S50-PH-5-B01-PP | 952001960 | | |
| Long Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-PA-2-C01-NN | 952001620 | |
| | | | PNP | S50-PA-2-C01-PP | 952001050 | |
| | | M12 Connector | NPN | S50-PA-5-C01-NN | 952001510 | |
| | | | PNP | S50-PA-5-C01-PP | 952001060 | |
| | LED, Radial optic | 2m Cable | NPN | S50-PR-2-C01-NN | 952001790 | |
| | | | PNP | S50-PR-2-C01-PP | 952001070 | |
| | | M12 Connector | NPN | S50-PR-5-C01-NN | 952001730 | |
| | | | PNP | S50-PR-5-C01-PP | 952001080 | |
| | LASER, Axial optic | 2m Cable | NPN | S50-PL-2-C01-NN | 952001880 | |
| | | | PNP | S50-PL-2-C01-PP | 952001380 | |
| | | M12 Connector | NPN | S50-PL-5-C01-NN | 952001850 | |
| | | | PNP | S50-PL-5-C01-PP | 952001390 | |
| | LASER, Radial optic | 2m Cable | NPN | S50-PH-2-C01-NN | 952001990 | |
| | | | PNP | S50-PH-2-C01-PP | 952001980 | |
| | | M12 Connector | NPN | S50-PH-5-C01-NN | 952002010 | |
| | | | PNP | S50-PH-5-C01-PP | 952002000 | |
| Short Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-PA-2-C10-NN | 952001630 | |
| | | | PNP | S50-PA-2-C10-PP | 952001240 | |
| | | M12 Connector | NPN | S50-PA-5-C10-NN | 952001520 | |
| | PNP | | S50-PA-5-C10-PP | 952001250 | | |
| | LED, Radial optic | 2m Cable | NPN | S50-PR-2-C10-NN | 952001800 | |
| | | | PNP | S50-PR-2-C10-PP | 952001490 | |
| M12 Connector | | NPN | S50-PR-5-C10-NN | 952001740 | | |
| Medium Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-PA-2-C21-NN | 952002170 | |
| | | | PNP | S50-PA-2-C21-PP | 952002160 | |
| | | M12 Connector | NPN | S50-PA-5-C21-NN | 952002190 | |
| | PNP | | S50-PA-5-C21-PP | 952002180 | | |
| | Fixed focus | LED, Axial optic | 2m Cable | NPN | S50-PA-2-D00-NN | 952001640 |
| | | | | PNP | S50-PA-2-D00-PP | 952001090 |
| M12 Connector | | | NPN | S50-PA-5-D00-NN | 952001530 | |
| | | PNP | S50-PA-5-D00-PP | 952001100 | | |
| LED, Radial optic | | 2m Cable | NPN | S50-PR-2-D00-NN | 952001810 | |
| | | | PNP | S50-PR-2-D00-PP | 952001110 | |
| | M12 Connector | NPN | S50-PR-5-D00-NN | 952001750 | | |
| Fiber optic | LED, Axial optic | 2m Cable | NPN | S50-PA-2-E01-NN | 952001650 | |
| | | | PNP | S50-PA-2-E01-PP | 952001130 | |
| | | M12 Connector | NPN | S50-PA-5-E01-NN | 952001540 | |
| | | | PNP | S50-PA-5-E01-PP | 952001140 | |

TUBULAR SENSORS

| OPTIC FUNCTION | EMISSION | CONNECTION | OUTPUT | MODEL | ORDER No. |
|---------------------------------|---------------------|---------------|-----------------|-----------------|-----------|
| Through beam receiver | LED, Axial optic | 2m Cable | NPN | S50-PA-2-F01-NN | 952001660 |
| | | | PNP | S50-PA-2-F01-PP | 952001150 |
| | | M12 Connector | NPN | S50-PA-5-F01-NN | 952001550 |
| | | | PNP | S50-PA-5-F01-PP | 952001160 |
| | LED, Radial optic | 2m Cable | NPN | S50-PR-2-F01-NN | 952001820 |
| | | | PNP | S50-PR-2-F01-PP | 952001170 |
| | | M12 Connector | NPN | S50-PR-5-F01-NN | 952001760 |
| | | | PNP | S50-PR-5-F01-PP | 952001180 |
| | LASER, Axial optic | 2m Cable | NPN | S50-PL-2-F01-NN | 952001890 |
| | | | PNP | S50-PL-2-F01-PP | 952001400 |
| | | M12 Connector | NPN | S50-PL-5-F01-NN | 952001860 |
| | | | PNP | S50-PL-5-F01-PP | 952001410 |
| LASER, Radial optic | 2m Cable | NPN | S50-PH-2-F01-NN | 952002030 | |
| | | PNP | S50-PH-2-F01-PP | 952002020 | |
| | M12 Connector | NPN | S50-PH-5-F01-NN | 952002050 | |
| | | PNP | S50-PH-5-F01-PP | 952002040 | |
| Through beam emitter | LED, Axial optic | 2m Cable | - | S50-PA-2-G00-XG | 952001190 |
| | | M12 Connector | - | S50-PA-5-G00-XG | 952001200 |
| | LED, Radial optic | 2m Cable | - | S50-PR-2-G00-XG | 952001210 |
| | | M12 Connector | - | S50-PR-5-G00-XG | 952001220 |
| | LASER, Axial optic | 2m Cable | - | S50-PL-2-G00-XG | 952001420 |
| | | M12 Connector | - | S50-PL-5-G00-XG | 952001430 |
| | LASER, Radial optic | 2m Cable | - | S50-PH-2-G00-XG | 952002060 |
| | | M12 Connector | - | S50-PH-5-G00-XG | 952002070 |
| Background suppression | LED, Axial optic | 2m Cable | NPN | S50-PA-2-M03-NN | 952001670 |
| | | | PNP | S50-PA-2-M03-PP | 952001230 |
| | | M12 Connector | NPN | S50-PA-5-M03-NN | 952001560 |
| | | | PNP | S50-PA-5-M03-PP | 952001000 |
| | LED, Radial optic | 2m Cable | NPN | S50-PS-2-M03-NN | 952001900 |
| | | M12 Connector | PNP | S50-PS-2-M03-PP | 952001910 |
| Retroreflective for transparent | LED, Axial optic | 2m Cable | NPN | S50-PA-2-T01-NN | 952001690 |
| | | | PNP | S50-PA-2-T01-PP | 952001260 |
| | | M12 Connector | NPN | S50-PA-5-T01-NN | 952001580 |
| | | | PNP | S50-PA-5-T01-PP | 952001270 |
| | LED, Radial optic | 2m Cable | NPN | S50-PR-2-T01-NN | 952001830 |
| | | | PNP | S50-PR-2-T01-PP | 952001280 |
| | | M12 Connector | NPN | S50-PR-5-T01-NN | 952001770 |
| | | | PNP | S50-PR-5-T01-PP | 952001290 |
| Luminescence | LED, Axial optic | 2m Cable | NPN | S50-PA-2-U03-NN | 952001700 |
| | | | PNP | S50-PA-2-U03-PP | 952001300 |
| | | M12 Connector | NPN | S50-PA-5-U03-NN | 952001590 |
| | | | PNP | S50-PA-5-U03-PP | 952001310 |
| Contrast | LED, Axial optic | 2m Cable | NPN | S50-PA-2-W03-NN | 952001710 |
| | | | PNP | S50-PA-2-W03-PP | 952001320 |
| | | M12 Connector | NPN | S50-PA-5-W03-NN | 952001600 |
| | | | PNP | S50-PA-5-W03-PP | 952001330 |

S50 METAL MODELS

| OPTIC FUNCTION | EMISSION | CONNECTION | OUTPUT | MODEL | ORDER No. |
|---------------------------|--------------------|---------------|-----------------|-----------------|-----------|
| Retroreflective | LED, Axial optic | 2m Cable | NPN | S50-MA-2-A00-NN | 952022090 |
| | | | PNP | S50-MA-2-A00-PP | 952022080 |
| | | M12 Connector | NPN | S50-MA-5-A00-NN | 952022110 |
| | | | PNP | S50-MA-5-A00-PP | 952022100 |
| Polarized retroreflective | LED, Axial optic | 2m Cable | NPN | S50-MA-2-B01-NN | 952021500 |
| | | | PNP | S50-MA-2-B01-PP | 952021000 |
| | | M12 Connector | NPN | S50-MA-5-B01-NN | 952021660 |
| | | | PNP | S50-MA-5-B01-PP | 952021200 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-B01-NN | 952021600 |
| | | | PNP | S50-MR-2-B01-PP | 952021140 |
| | | M12 Connector | NPN | S50-MR-5-B01-NN | 952021760 |
| | | | PNP | S50-MR-5-B01-PP | 952021340 |
| | LASER, Axial optic | 2m Cable | NPN | S50-ML-2-B01-NN | 952021820 |
| | | | PNP | S50-ML-2-B01-PP | 952021400 |
| | | M12 Connector | NPN | S50-ML-5-B01-NN | 952021850 |
| | | | PNP | S50-ML-5-B01-PP | 952021440 |
| LASER, Radial optic | 2m Cable | NPN | S50-MH-2-B01-NN | 952021950 | |
| | | PNP | S50-MH-2-B01-PP | 952021940 | |
| | M12 Connector | NPN | S50-MH-5-B01-NN | 952021970 | |
| | | PNP | S50-MH-5-B01-PP | 952021960 | |
| Long Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-MA-2-C01-NN | 952021510 |
| | | | PNP | S50-MA-2-C01-PP | 952021010 |
| | | M12 Connector | NPN | S50-MA-5-C01-NN | 952021670 |
| | | | PNP | S50-MA-5-C01-PP | 952021210 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-C01-NN | 952021610 |
| | | | PNP | S50-MR-2-C01-PP | 952021150 |
| | | M12 Connector | NPN | S50-MR-5-C01-NN | 952021770 |
| | | | PNP | S50-MR-5-C01-PP | 952021350 |
| | LASER, Axial optic | 2m Cable | NPN | S50-ML-2-C01-NN | 952021830 |
| | | | PNP | S50-ML-2-C01-PP | 952021410 |
| | | M12 Connector | NPN | S50-ML-5-C01-NN | 952021860 |
| | | | PNP | S50-ML-5-C01-PP | 952021450 |
| LASER, Radial optic | 2m Cable | NPN | S50-MH-2-C01-NN | 952021990 | |
| | | PNP | S50-MH-2-C01-PP | 952021980 | |
| | M12 Connector | NPN | S50-MH-5-C01-NN | 952022010 | |
| | | PNP | S50-MH-5-C01-PP | 952022000 | |
| Short Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-MA-2-C10-NN | 952021520 |
| | | | PNP | S50-MA-2-C10-PP | 952021020 |
| | | M12 Connector | NPN | S50-MA-5-C10-NN | 952021680 |
| | | | PNP | S50-MA-5-C10-PP | 952021220 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-C10-NN | 952021620 |
| | | | PNP | S50-MR-2-C10-PP | 952021490 |
| | | M12 Connector | NPN | S50-MR-5-C10-NN | 952021780 |
| | | | PNP | S50-MR-5-C10-PP | 952021480 |
| Medium Diffuse proximity | LED, Axial optic | 2m Cable | NPN | S50-MA-2-C21-NN | 952022130 |
| | | | PNP | S50-MA-2-C21-PP | 952022120 |
| | | M12 Connector | NPN | S50-MA-5-C21-NN | 952022150 |
| | | | PNP | S50-MA-5-C21-PP | 952022140 |
| Fixed focus | LED, Axial optic | 2m Cable | NPN | S50-MA-2-D00-NN | 952021530 |
| | | | PNP | S50-MA-2-D00-PP | 952021030 |
| | | M12 Connector | NPN | S50-MA-5-D00-NN | 952021690 |
| | | | PNP | S50-MA-5-D00-PP | 952021230 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-D00-NN | 952021630 |
| | | | PNP | S50-MR-2-D00-PP | 952021160 |
| | | M12 Connector | NPN | S50-MR-5-D00-NN | 952021790 |
| | | | PNP | S50-MR-5-D00-PP | 952021360 |
| Fiber optic | LED, Axial optic | 2m Cable | NPN | S50-MA-2-E01-NN | 952021880 |
| | | | PNP | S50-MA-2-E01-PP | 952021040 |
| | | M12 Connector | NPN | S50-MA-5-E01-NN | 952021890 |
| | | | PNP | S50-MA-5-E01-PP | 952021240 |

TUBULAR SENSORS

| OPTIC FUNCTION | EMISSION | CONNECTION | OUTPUT | MODEL | ORDER No. |
|---------------------------------|---------------------|-------------------|-----------------|-----------------|-----------------|
| Through beam receiver | LED, Axial optic | 2m Cable | NPN | S50-MA-2-F01-NN | 952021540 |
| | | | PNP | S50-MA-2-F01-PP | 952021050 |
| | | M12 Connector | NPN | S50-MA-5-F01-NN | 952021700 |
| | | | PNP | S50-MA-5-F01-PP | 952021250 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-F01-NN | 952021640 |
| | | | PNP | S50-MR-2-F01-PP | 952021170 |
| | | M12 Connector | NPN | S50-MR-5-F01-NN | 952021800 |
| | | | PNP | S50-MR-5-F01-PP | 952021370 |
| | LASER, Axial optic | 2m Cable | NPN | S50-ML-2-F01-NN | 952021840 |
| | | | PNP | S50-ML-2-F01-PP | 952021420 |
| | | M12 Connector | NPN | S50-ML-5-F01-NN | 952021870 |
| | | | PNP | S50-ML-5-F01-PP | 952021460 |
| LASER, Radial optic | 2m Cable | NPN | S50-MH-2-F01-NN | 952022030 | |
| | | PNP | S50-MH-2-F01-PP | 952022020 | |
| | M12 Connector | NPN | S50-MH-5-F01-NN | 952022050 | |
| | | PNP | S50-MH-5-F01-PP | 952022040 | |
| Through beam emitter | LED, Axial optic | 2m Cable | - | S50-MA-2-G00-XG | 952021060 |
| | | M12 Connector | - | S50-MA-5-G00-XG | 952021260 |
| | LED, Radial optic | 2m Cable | - | S50-MR-2-G00-XG | 952021180 |
| | | M12 Connector | - | S50-MR-5-G00-XG | 952021380 |
| | LASER, Axial optic | 2m Cable | - | S50-ML-2-G00-XG | 952021430 |
| | | M12 Connector | - | S50-ML-5-G00-XG | 952021470 |
| | LASER, Radial optic | 2m Cable | - | S50-MH-2-G00-XG | 952022060 |
| | | M12 Connector | - | S50-MH-5-G00-XG | 952022070 |
| Background suppression | LED, Axial optic | 2m Cable | NPN | S50-MA-2-M03-NN | 952021550 |
| | | | PNP | S50-MA-2-M03-PP | 952021070 |
| | M12 Connector | PNP | S50-MA-5-M03-PP | 952021270 | |
| | | LED, Radial optic | 2m Cable | PNP | S50-MS-2-M03-PP |
| M12 Connector | PNP | | S50-MS-5-M03-PP | 952021930 | |
| Retroreflective for transparent | LED, Axial optic | 2m Cable | NPN | S50-MA-2-T01-NN | 952021570 |
| | | | PNP | S50-MA-2-T01-PP | 952021090 |
| | | M12 Connector | NPN | S50-MA-5-T01-NN | 952021730 |
| | | | PNP | S50-MA-5-T01-PP | 952021290 |
| | LED, Radial optic | 2m Cable | NPN | S50-MR-2-T01-NN | 952021650 |
| | | | PNP | S50-MR-2-T01-PP | 952021190 |
| | | M12 Connector | NPN | S50-MR-5-T01-NN | 952021810 |
| | | | PNP | S50-MR-5-T01-PP | 952021390 |
| Luminescence | LED, Axial optic | M12 Connector | PNP | S50-MA-5-U03-PP | 952021300 |
| Contrast | LED, Axial optic | 2m Cable | PNP | S50-MA-2-W03-PP | 952021110 |
| | | M12 Connector | NPN | S50-MA-5-W03-NN | 952021750 |
| | | | PNP | S50-MA-5-W03-PP | 952021310 |

S51 MODELS

| OPTIC FUNCTION | HOUSING/OPTIC | CONNECTION | OUTPUT | MODEL | ORDER No. |
|-----------------|-----------------------------|---------------|--------|-----------------|-----------|
| Retroreflective | Nickel Plated Brass, Axial | 2m Cable | NPN | S51-MA-2-A00-NK | 952701601 |
| | | | PNP | S51-MA-2-A00-PK | 952701541 |
| | | M12 Connector | NPN | S51-MA-5-A00-NK | 952701801 |
| | | | PNP | S51-MA-5-A00-PK | 952701531 |
| | Nickel Plated Brass, Radial | 2m Cable | NPN | S51-MR-2-A00-NK | 952701711 |
| | | | PNP | S51-MR-2-A00-PK | 952701651 |
| | | M12 Connector | NPN | S51-MR-5-A00-NK | 952701911 |
| | | | PNP | S51-MR-5-A00-PK | 952701851 |
| | Plastic, Axial | 2m Cable | NPN | S51-PA-2-A00-NK | 952701071 |
| | | | PNP | S51-PA-2-A00-PK | 952701001 |
| | | M12 Connector | NPN | S51-PA-5-A00-NK | 952701331 |
| | | | PNP | S51-PA-5-A00-PK | 952701261 |
| | Plastic, Radial | 2m Cable | NPN | S51-PR-2-A00-NK | 952701201 |
| | | | PNP | S51-PR-2-A00-PK | 952701131 |
| | | M12 Connector | NPN | S51-PR-5-A00-NK | 952701461 |
| | | | PNP | S51-PR-5-A00-PK | 952701391 |

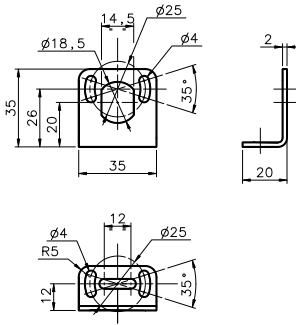
| OPTIC FUNCTION | HOUSING/OPTIC | CONNECTION | OUTPUT | MODEL | ORDER No. | |
|-----------------------------|-----------------------------|-----------------------------|---------------|-----------------|-----------------|-----------|
| Polarized retroreflective | Nickel Plated Brass, Axial | 2m Cable | NPN | S51-MA-2-B01-NK | 952701611 | |
| | | | PNP | S51-MA-2-B01-PK | 952701551 | |
| | | M12 Connector | NPN | S51-MA-5-B01-NK | 952701811 | |
| | | | PNP | S51-MA-5-B01-PK | 952701761 | |
| | Nickel Plated Brass, Radial | 2m Cable | NPN | S51-MR-2-B01-NK | 952701721 | |
| | | | PNP | S51-MR-2-B01-PK | 952701661 | |
| | | M12 Connector | NPN | S51-MR-5-B01-NK | 952701921 | |
| | | | PNP | S51-MR-5-B01-PK | 952701861 | |
| | Plastic, Axial | 2m Cable | NPN | S51-PA-2-B01-NK | 952701081 | |
| | | | PNP | S51-PA-2-B01-PK | 952701011 | |
| | | M12 Connector | NPN | S51-PA-5-B01-NK | 952701341 | |
| | | | PNP | S51-PA-5-B01-PK | 952701271 | |
| | Plastic, Radial | 2m Cable | NPN | S51-PR-2-B01-NK | 952701211 | |
| | | | PNP | S51-PR-2-B01-PK | 952701141 | |
| | | M12 Connector | NPN | S51-PR-5-B01-NK | 952701471 | |
| | | | PNP | S51-PR-5-B01-PK | 952701401 | |
| | Medium diffuse proximity | Nickel Plated Brass, Axial | 2m Cable | NPN | S51-MA-2-C01-NK | 952701621 |
| | | | | PNP | S51-MA-2-C01-PK | 952701561 |
| M12 Connector | | | NPN | S51-MA-5-C01-NK | 952701821 | |
| | | | PNP | S51-MA-5-C01-PK | 952701771 | |
| Nickel Plated Brass, Radial | | 2m Cable | NPN | S51-MR-2-C01-NK | 952701731 | |
| | | | PNP | S51-MR-2-C01-PK | 952701671 | |
| | | M12 Connector | NPN | S51-MR-5-C01-NK | 952701931 | |
| | | | PNP | S51-MR-5-C01-PK | 952701871 | |
| Plastic, Axial | | 2m Cable | NPN | S51-PA-2-C01-NK | 952701091 | |
| | | | PNP | S51-PA-2-C01-PK | 952701021 | |
| | | M12 Connector | NPN | S51-PA-5-C01-NK | 952701351 | |
| | | | PNP | S51-PA-5-C01-PK | 952701281 | |
| Plastic, Radial | | 2m Cable | NPN | S51-PR-2-C01-NK | 952701221 | |
| | | | PNP | S51-PR-2-C01-PK | 952701151 | |
| | | M12 Connector | NPN | S51-PR-5-C01-NK | 952701481 | |
| | | | PNP | S51-PR-5-C01-PK | 952701411 | |
| Short diffuse proximity | | Nickel Plated Brass, Axial | 2m Cable | NPN | S51-MA-2-C10-NK | 952701631 |
| | | | | PNP | S51-MA-2-C10-PK | 952701571 |
| | | | M12 Connector | NPN | S51-MA-5-C10-NK | 952701831 |
| | | | | PNP | S51-MA-5-C10-PK | 952701521 |
| | | Nickel Plated Brass, Radial | 2m Cable | NPN | S51-MR-2-C10-NK | 952701741 |
| | | | | PNP | S51-MR-2-C10-PK | 952701681 |
| | | | M12 Connector | NPN | S51-MR-5-C10-NK | 952701941 |
| | | | | PNP | S51-MR-5-C10-PK | 952701881 |
| | Plastic, Axial | 2m Cable | NPN | S51-PA-2-C10-NK | 952701101 | |
| | | | PNP | S51-PA-2-C10-PK | 952701031 | |
| | | M12 Connector | NPN | S51-PA-5-C10-NK | 952701361 | |
| | | | PNP | S51-PA-5-C10-PK | 952701291 | |
| | Plastic, Radial | 2m Cable | NPN | S51-PR-2-C10-NK | 952701231 | |
| | | | PNP | S51-PR-2-C10-PK | 952701161 | |
| | | M12 Connector | NPN | S51-PR-5-C10-NK | 952701491 | |
| | | | PNP | S51-PR-5-C10-PK | 952701421 | |
| | Narrow beam proximity | Nickel Plated Brass, Axial | M12 Connector | PNP | S51-MA-5-C20-PK | 952701961 |
| | Through beam receiver | Nickel Plated Brass, Axial | 2m Cable | NPN | S51-MA-2-F00-NK | 952701641 |
| | | | | PNP | S51-MA-2-F00-PK | 952701581 |
| | | | M12 Connector | NPN | S51-MA-5-F00-NK | 952701841 |
| | | | | PNP | S51-MA-5-F00-PK | 952701781 |
| | | Nickel Plated Brass, Radial | 2m Cable | NPN | S51-MR-2-F00-NK | 952701751 |
| | | | | PNP | S51-MR-2-F00-PK | 952701691 |
| | | | M12 Connector | NPN | S51-MR-5-F00-NK | 952701951 |
| PNP | | | | S51-MR-5-F00-PK | 952701891 | |
| Plastic, Axial | | 2m Cable | NPN | S51-PA-2-F00-NK | 952701121 | |
| | | | PNP | S51-PA-2-F00-PK | 952701051 | |
| | | M12 Connector | NPN | S51-PA-5-F00-NK | 952701381 | |
| | | | PNP | S51-PA-5-F00-PK | 952701311 | |
| Plastic, Radial | | 2m Cable | NPN | S51-PR-2-F00-NK | 952701251 | |
| | | | PNP | S51-PR-2-F00-PK | 952701181 | |
| | | M12 Connector | NPN | S51-PR-5-F00-NK | 952701511 | |
| | | | PNP | S51-PR-5-F00-PK | 952701441 | |
| Through beam emitter | Nickel Plated Brass, Axial | 2m Cable | - | S51-MA-2-G00-XG | 952701591 | |
| | | M12 Connector | - | S51-MA-5-G00-XG | 952701791 | |
| | Nickel Plated Brass, Radial | 2m Cable | - | S51-MR-2-G00-XG | 952701701 | |
| | | M12 Connector | - | S51-MR-5-G00-XG | 952701901 | |
| | Plastic, Axial | 2m Cable | - | S51-PA-2-G00-XG | 952701061 | |
| | | M12 Connector | - | S51-PA-5-G00-XG | 952701321 | |
| | Plastic, Radial | 2m Cable | - | S51-PR-2-G00-XG | 952701191 | |
| | | M12 Connector | - | S51-PR-5-G00-XG | 952701451 | |

TUBULAR SENSORS

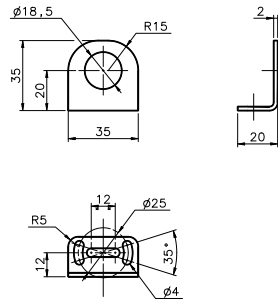
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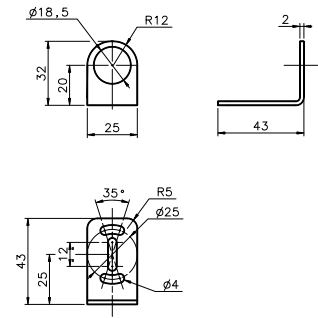
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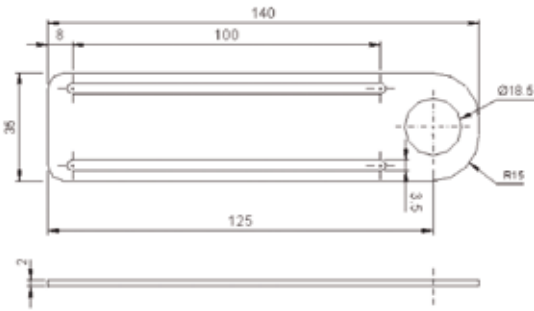
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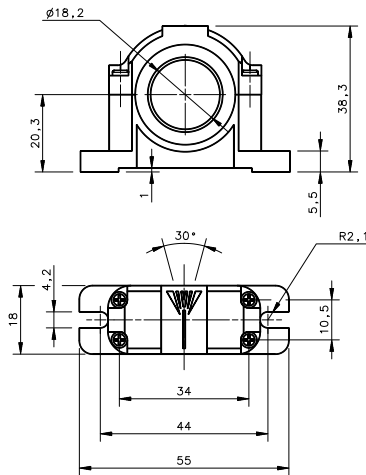
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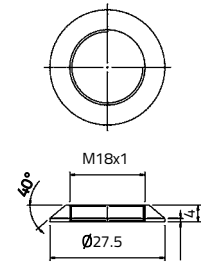
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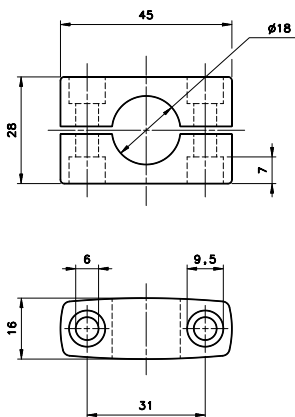
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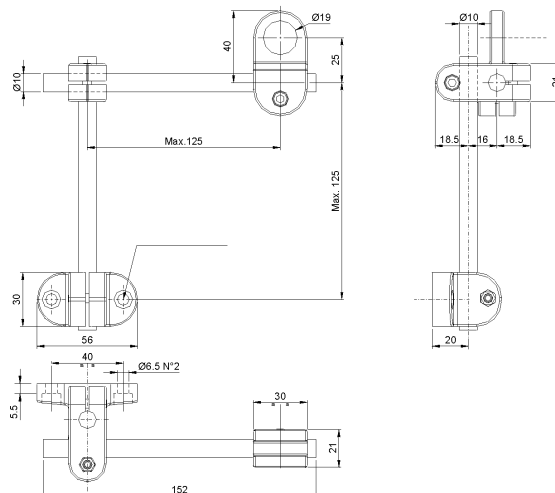
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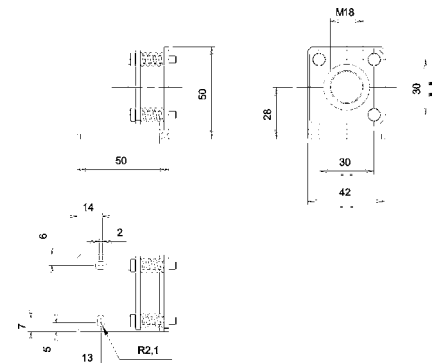
SP-40



JOINT 18



MICRO 18



mm

| MODEL | DESCRIPTION | ORDER No. |
|--------------|---|------------|
| ST-5010 | M18/14 mounting bracket | 95ACC5230 |
| ST-5011 | M18 mounting bracket short | 95ACC5240 |
| ST-5012 | M18 mounting bracket long | 95ACC5250 |
| ST-5017 | M18 mounting bracket | 95ACC5270 |
| S50 EASY -IN | M18/14 EASY in™ adjustable mounting support | 95ACC 5300 |
| JOINT -18 | M18 jointed support | 95ACC 5220 |
| MICRO -18 | support with micrometric regulation for tubular M18 sensors | 95ACC 1380 |
| ST1218 | M12/M18 mounting brackets | 95ACC3340 |
| ST1830 | M18/M30 mounting brackets | 95ACC3350 |
| SP-40 | mounting bracket tubular | 95ACC1370 |
| SWING-18 | adjustable support for M18 tubular sensors | 895000006 |
| PLASTIC NUT | flared mounting nut | 95ACC2630 |
| MEK -PROOF | front protection (only for metal models) | G5000001 |

CABLES

| TYPE | DESCRIPTION | LENGTH | MODEL | ORDER No. |
|--|---------------------------------|-----------------------|---------------|-----------|
| Axial M12 Connector | 4-pole, grey, P.V.C. | 3 m | CS-A1-02-G-03 | 95A251380 |
| | | 5 m | CS-A1-02-G-05 | 95A251270 |
| | | 7 m | CS-A1-02-G-07 | 95A251280 |
| | | 10 m | CS-A1-02-G-10 | 95A251390 |
| Radial M12 Connector | 4-pole, P.U.R. | 2 m | CS-A1-02-R-02 | 95A251540 |
| | | 5 m | CS-A1-02-R-05 | 95A251560 |
| | | 10 m | CS-A1-02-R-10 | 95A251560 |
| Radial M12 Connector | 4-pole, grey, P.V.C. | 3 m | CS-A2-02-G-03 | 95A251360 |
| | | 5 m | CS-A2-02-G-05 | 95A251240 |
| | | 7 m | CS-A2-02-G-07 | 95A251245 |
| | | 10 m | CS-A2-02-G-10 | 95A251260 |
| Radial M12 Connector with LED (for PNP N.O. sensors) | 4-pole, P.U.R. | 2 m | CS-A2-02-R-02 | 95A251550 |
| | | 5 m | CS-A2-02-R-05 | 95A251570 |
| Radial M12 Connector with LED (for PNP N.O. sensors) | 4-pole, grey, P.V.C. | 3 m | CS-A2-12-G-03 | 95A251400 |
| | | 5 m | CS-A2-12-G-05 | 95A251350 |
| | | 10 m | CS-A2-12-G-10 | 95A251370 |
| Axial M12 Connector | 4-pole, shielded, black, P.V.C. | 3 m | CV-A1-22-B-03 | 95ACC1480 |
| | | 5 m | CV-A1-22-B-05 | 95ACC1490 |
| | | 10 m | CV-A1-22-B-10 | 95ACC1500 |
| | | 15 m | CV-A1-22-B-15 | 95ACC2070 |
| | | 25 m | CV-A1-22-B-25 | 95ACC2090 |
| Radial M12 Connector | 4-pole, shielded, black, P.V.C. | 3 m | CV-A2-22-B-03 | 95ACC1540 |
| | | 5 m | CV-A2-22-B-05 | 95ACC1550 |
| | | 10 m | CV-A2-22-B-10 | 95ACC1560 |
| Axial M12 Connector | 4-pole, U.L., black, P.V.C. | 3 m | CS-A1-02-U-03 | 95ASE1120 |
| | | 5 m | CS-A1-02-U-05 | 95ASE1130 |
| | | 10 m | CS-A1-02-U-10 | 95ASE1140 |
| | | 15 m | CS-A1-02-U-15 | 95ASE1150 |
| | | 25 m | CS-A1-02-U-25 | 95ASE1160 |
| Radial M12 Connector | 4-pole, black | Connector- not cabled | CS-A1-02-B-NC | G5085002 |
| | | Connector- not cabled | CS-A2-02-B-NC | G5085003 |