

FT 25-RF

Photoelectric diffuse sensor with background suppression, fixed focus



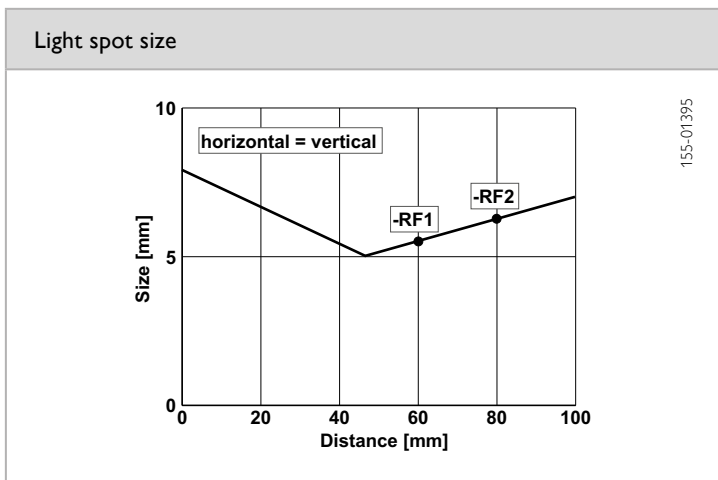
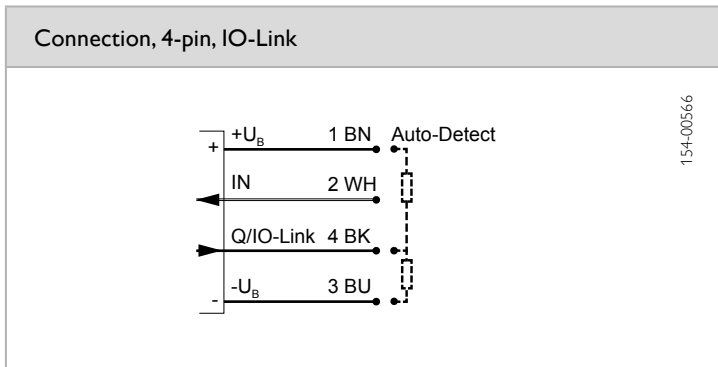
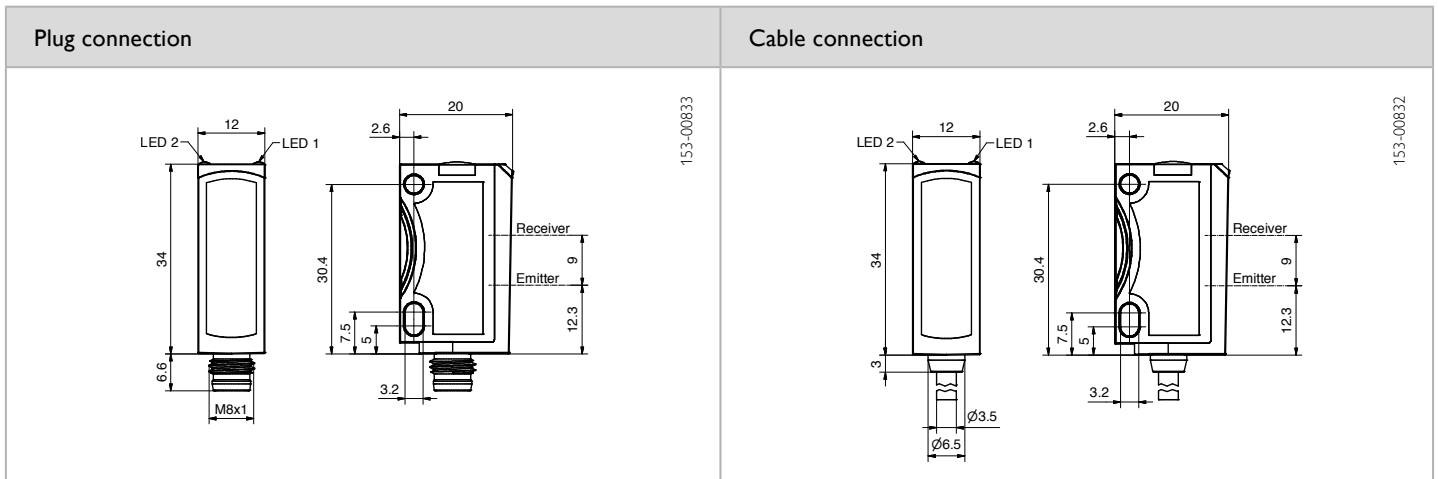
PRODUCT HIGHLIGHTS

- Precise fixed background suppression
- Economical solution for numerous applications
- Tamper-proof sensor design – no misalignment possible
- Simple alignment thanks to easily visible light spot
- Robust glass-fibre-reinforced plastic housings

| Optical data | | Functions | |
|------------------------------------|--|--|---|
| Scanning distance | 1 ... 60 mm ¹ / 1 ... 80 mm ¹ | Indicator LED, green | Operating voltage indicator |
| Type of light | LED, red, 632 nm | Indicator LED, yellow | Switching output indicator |
| Light spot size | See diagram | Adjustment possibilities | N.O./N.C. via control input and IO-Link |
| Hysteresis | ~ 5 % ² | | |
| Electrical data | | Mechanical data | |
| Operating voltage, +U _B | 10 ... 30V DC ³ | Dimensions | 34 x 20 x 12 mm |
| No-load current, I ₀ | ≤ 30 mA | Enclosure rating | IP 69 & IP 67 ⁵ |
| Output current, I _e | ≤ 100 mA | Material, housing | ABS |
| Protective circuits | Reverse-polarity protection, U _B / short-circuit protection (Q) | Material, front screen | PMMA |
| Protection Class | 2 | Type of connection | See selection table |
| Power On Delay | < 300 ms | Ambient temperature: operation | -20 ... +60 °C ⁶ |
| Switching output, Q | 1x Auto-Detect (PNP/NPN) ⁴ | Ambient temperature: storage | -20 ... +80 °C |
| Output function | N.O./N.C. | Weight (plug device) | 10 g |
| Switching frequency, f (ti/tp 1:1) | ≤ 1000 Hz | Weight (metal plug device ⁷) | 10 g |
| Response time | 500 μs | Weight (cable device) | 40 g |
| Control input, IN | +U _B = N.C. -U _B / Open = N.O. | Vibration and impact resistance | EN 60947-5-2 |
| IO-Link | | | |
| Communication mode | COM 2 | | |
| Min. cycletime | 2.3 ms | | |
| SIO mode | Compatible | | |
| Length process data | 16 Bit | | |
| Specification | 1.1 | | |

¹ Reference material: white, 90 % reflectivity ² Based on scanning distance ³ Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz ⁴ Auto-Detect, automatic PNP/NPN selection by the sensor, PNP or NPN fixed via IO-Link ⁵ With connected IP 67 / IP 69 plug ⁶ UL: -20 ... +50 °C ⁷ No Ecolab

| Scanning distance | Switching output | Type of connection | Part number | Article number |
|-------------------|------------------|----------------------------------|--------------------|----------------|
| 1 ... 60 mm | Auto-Detect | Plug, M8x1, 4-pin, IO-Link | FT 25-RF1-PNSL-M4 | 608-11058 |
| 1 ... 60 mm | Auto-Detect | Metal plug, M8x1, 4-pin, IO-Link | FT 25-RF1-PNSL-M4M | 608-11062 |
| 1 ... 60 mm | Auto-Detect | Cable, 2 m, 4-wire, IO-Link | FT 25-RF1-PNSL-K4 | 608-11059 |
| 1 ... 80 mm | Auto-Detect | Plug, M8x1, 4-pin, IO-Link | FT 25-RF2-PNSL-M4 | 608-11060 |
| 1 ... 80 mm | Auto-Detect | Cable, 2 m, 4-wire, IO-Link | FT 25-RF2-PNSL-K4 | 608-11061 |



| Reference material | Detection range |
|--------------------|---------------------|
| White (90 %) | 1 ... 60 mm / 80 mm |
| Grey (18 %) | 2 ... 60 mm / 80 mm |
| Black (6 %) | 4 ... 60 mm / 80 mm |

Accessories

| | |
|--------------------|----------------|
| Connection cables | From Page A-46 |
| Brackets | From Page A-4 |
| SensIO (901-01000) | From Page A-56 |