

FT 25-RL

Diffuse laser sensor



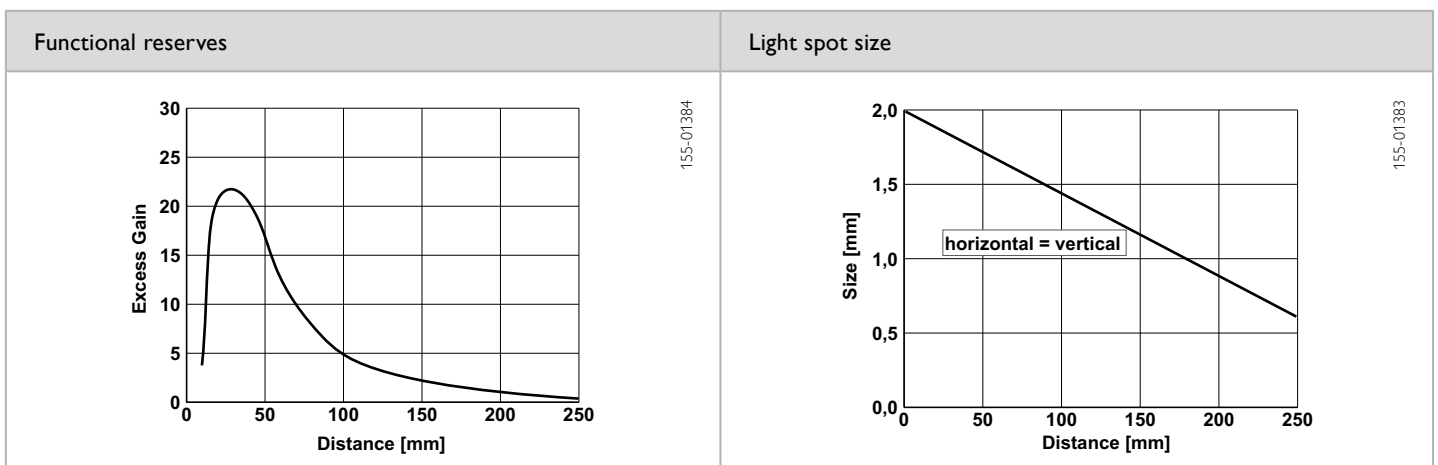
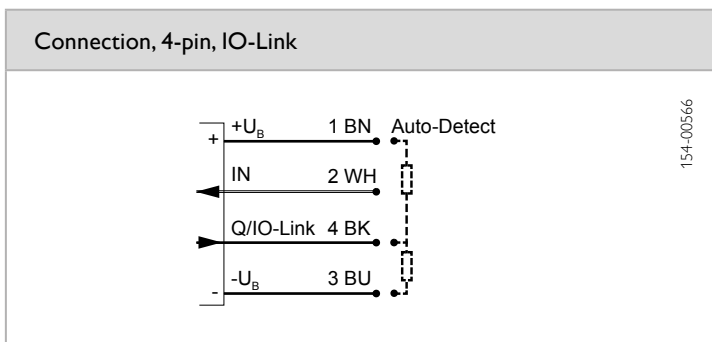
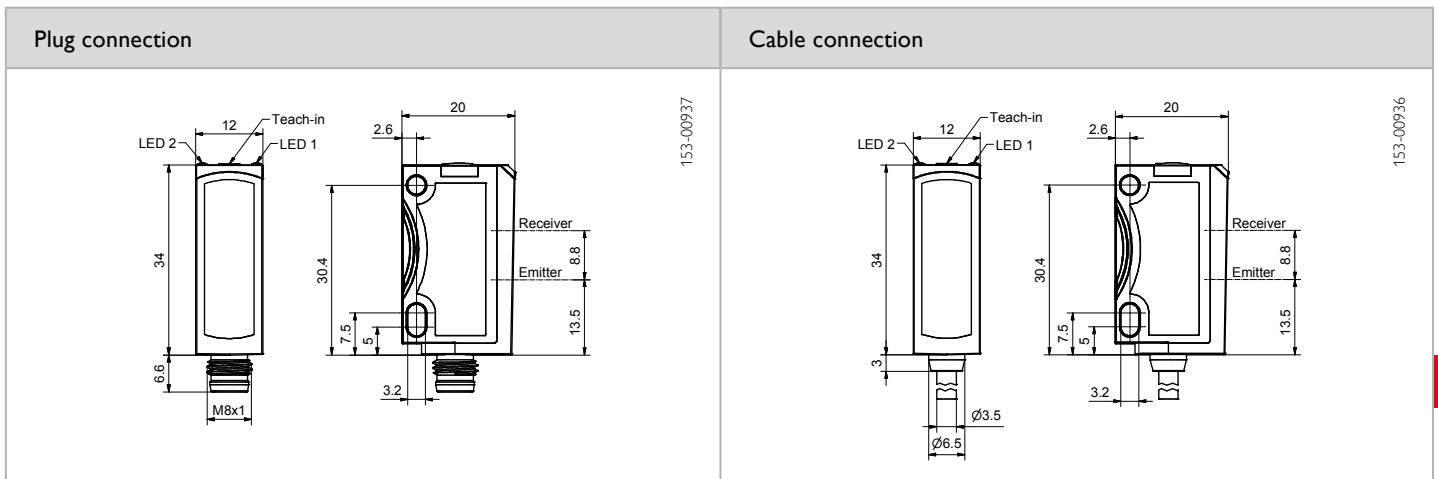
PRODUCT HIGHLIGHTS

- Differentiates between even the slightest of grey value differences
- Sensor settings via teach-in and control input
- Durable laser printing
- Very small, easily visible laser light spot
- Wide range of variants

| Optical data | | Functions | |
|------------------------------------|--|--|--|
| Scanning distance | 1 ... 250 mm ¹ | Indicator LED, green | Operating voltage indicator |
| Adjustment range | 25 ... 250 mm ¹ | Indicator LED, yellow | Switching output indicator |
| Type of light | Laser, red, 650 nm | Sensitivity adjustment | Via Teach-in button, control input and IO-Link |
| Light spot size | See diagram | Teach-in modes | Mode 1: during running process Mode 2: during standing process |
| Laser Class (IEC 60825-1) | 1 | Adjustment possibilities | N.O./N.C. via Teach-in button and control input Button lock via control input Wide variety of adjustment possibilities via IO-Link |
| Hysteresis | ≤ 10 % ² | Default settings | Max. scanning distance and N.O. |
| 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 (metal plug device ⁷) | 10 g |
| Switching frequency, f (ti/tp 1:1) | ≤ 4000 Hz | Weight (cable device) | 40 g |
| Response time | 125 μs | Weight (pigtail) | 20 g |
| Control input, IN | +U _b = teach-in -U _b = button locked Open = normal operation | 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 Up to scanning distance of 150 mm 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 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 ... 250 mm | Auto-Detect | Metal plug, M8x1, 4-pin, IO-Link | FT 25-RL-PNSL-M4M | 609-21021 |
| 1 ... 250 mm | Auto-Detect | Cable, 2 m, 4-wire, IO-Link | FT 25-RL-PNSL-K4 | 609-21019 |
| 1 ... 250 mm | Auto-Detect | Pigtail, 150 mm with plug, M8, 4-pin, IO-Link | FT 25-RL-PNSL-KM4 | 609-21018 |
| 1 ... 250 mm | Auto-Detect | Pigtail, 150 mm with plug, M12, 4-pin, IO-Link | FT 25-RL-PNSL-KL4 | 609-21020 |



| Reference material | Detection range | Accessories |
|--------------------|-----------------|---------------------|
| White (90 %) | 1 ... 250 mm | Connection cables |
| Grey (18 %) | 6 ... 100 mm | Brackets |
| Black (6 %) | 20 ... 60 mm | SensolO (901-01000) |
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