



Mid range distance sensors
Dx35, DR35

DR35-B15522



Model Name > [DR35-B15522](#)
Part No. > [1057659](#)



At a glance

- Maximum reliability, immunity to ambient light, and best price/performance ratio thanks to HDDM™ technology
- Large measuring range up to 35 m
- Great repeatability of 0.5 mm to 5 mm
- Fast detection with a switching frequency of up to 333 Hz
- Small housing size
- IO-Link as well as two switching outputs offering three switching modes
- Choice of infrared or red lasers in class 1

Your benefits

- Large measuring range up to 35 m in small housing sizes makes universal use and reduced inventory costs possible.
- Two switching outputs, each with three switching modes, provide a simple solution for demanding applications
- The high switching frequency of up to 333 Hz ensures rapid detection of position and increased throughput
- No cross talk when several sensors are being used simultaneously in a constricted space
- IO-Link offers full process control, from commissioning to service
- Reduced commissioning efforts and increased machine uptime thanks to excellent ambient light immunity
- Low investment costs and high performance levels guarantee a quick return on investment
- Offering easy alignment, optimal performance or inconspicuous detection, versatile light senders make it an ideal solution for all scenarios.



Performance

| | |
|---|--|
| Measurement range ¹⁾ : | 200 mm ... 35,000 mm, on reflective tape "Diamond Grade" |
| Resolution: | 0.1 mm |
| Repeatability ²⁾ : ³⁾ : ⁴⁾ : | 0.5 mm ... 5 mm |
| Accuracy ⁵⁾ : | Typ. ± 15 mm |
| Response time ⁶⁾ : ⁷⁾ : | 2.5 ms/6.5 ms/12.5 ms/24.5 ms/96.5 ms |
| Switching frequency ⁸⁾ : ⁹⁾ : | 333 Hz/100 Hz/50 Hz/25 Hz/6 Hz |
| Light source ¹⁰⁾ : | Laser, red |
| Typ. light spot size (distance): | 15 mm x 15 mm (at 2 m) |

| | |
|---|--|
| Additional function: | Set speed: Super Fast ... Super Slow IO-Link Reset to factory default Switching mode: Distance to reflective tape (DtR)/switching window (Wnd)/object between sensor and background (ObSB) Multifunctional input: laser off/external teach/deactivated Teach-in of switching output and switching output invertible |
| Laser class: | 1 (EN 60825-1) |
| Laser service life (MTTF at 25 °C): | 100,000 h |
| Output time ¹¹⁾ : ¹²⁾ : | 1 ms/2 ms/4 ms/8 ms/32 ms |

¹⁾ See characteristic curves repeatability ²⁾ Equivalent to 1σ ^{3) 5)} On reflective tape "Diamond Grade" ⁴⁾ 6 % ... 90 % remission ^{6) 8) 12)} Dependent on the set speed: Super Fast ... Super Slow ^{7) 9)} Lateral entry of object into measuring range ¹⁰⁾ Wavelength: 658 nm; max. output: 120 mW; pulse duration: 3 ns; pulse repetition rate: 1/250 ¹¹⁾ Continuous change of distance in measuring range.

Interfaces

| | |
|---|--|
| Output type ¹⁾ : ²⁾ : ³⁾ : | 2 x push-pull: PNP/NPN (100 mA), IO-Link |
| Hysteresis ⁴⁾ : | 0 mm ... 34,950 mm |
| Data interface: | IO-Link |

Multifunctional input (MF) ⁵⁾: 1 x

¹⁾ Output Q short-circuit protected ²⁾ Voltage drop < 3 V ³⁾ Output Q₂, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output/Q₁ not/ deactivated ⁴⁾ Adjustable via IO-Link ⁵⁾ Response time ≤ 60 ms

Mechanics/electronics

| | |
|--|--|
| Supply voltage V_s ¹⁾ : ²⁾ : | DC 12 V ... 30 V |
| Ripple ³⁾ : | ≤ 5 Vpp |
| Power consumption ⁴⁾ : ⁵⁾ : | ≤ 1.7 W |
| Initialization time: | ≤ 500 ms |
| Warm-up time: | ≤ 20 min |
| Housing material: | Plastic (ABS and PC) acrylic glass (PMMA) |
| Connection type: | Male connector, M12, 5-pin |
| Indication: | LEDs |
| Weight: | 65 g |

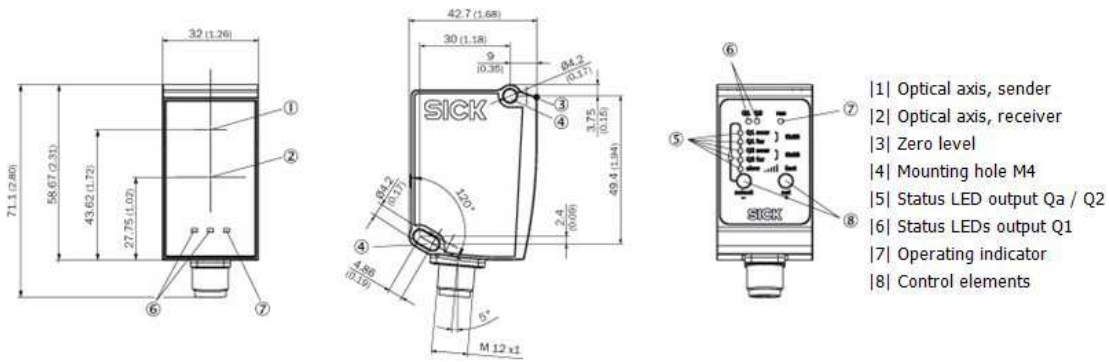
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ When using IO-Link output $V_s > 18$ V. ³⁾ May not fall short of or exceed V_s tolerances ⁴⁾ At 20 °C ⁵⁾ Without load

Ambient data

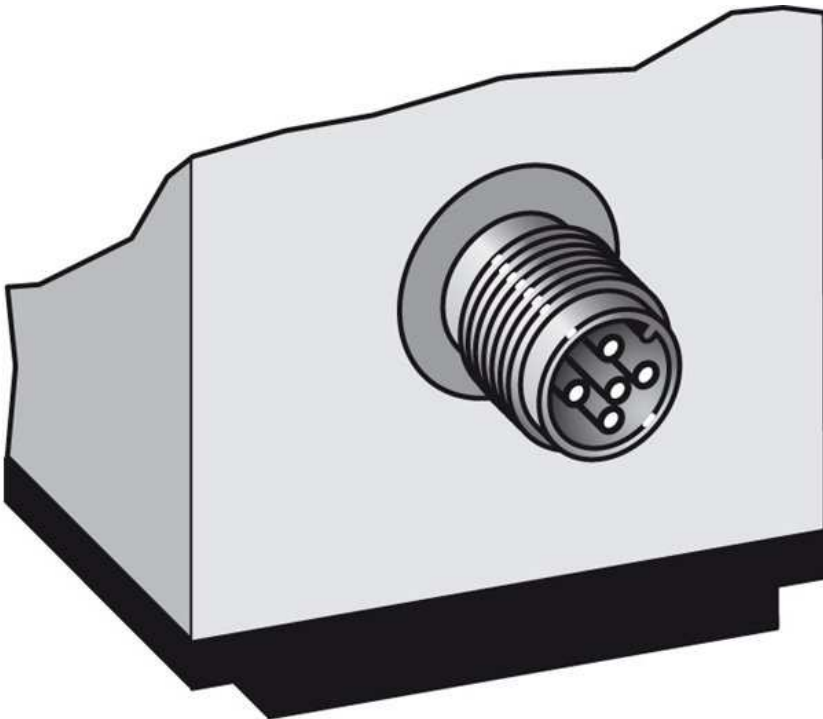
| | |
|-------------------------------------|--|
| Enclosure rating: | IP 65, IP 67 |
| Protection class: | III |
| Ambient temperature ¹⁾ : | Operation: -30 ... +55 °C, Storage: -40 ... +75 °C |
| Vibration resistance: | EN 60068-2-6/EN 60068-2-64 |
| Shock resistance: | EN 60068-2-27 |
| Typ. ambient light safety: | 40 klx |

¹⁾ $U_v \leq 24$ V

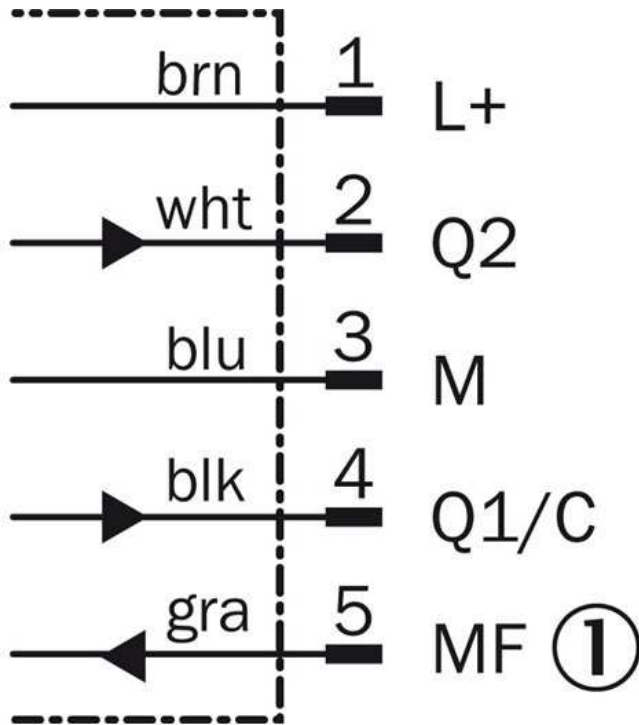
Dimensional drawing



Connection type



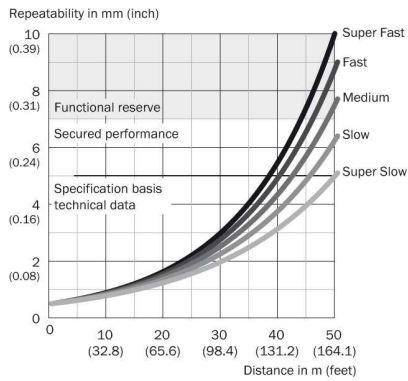
Connection diagram



[1] Multifunctional input (MF)

Characteristic curve 1) Super Slow ... 5) Super Fast

Super Slow ... Super Fast



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