



Mid range distance sensors
Dx35, DR35, IO-Link

DR35-B15822



Model Name > [DR35-B15822](#)
Part No. > [1057660](#)



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

| | |
|---|--|
| Measuring 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 |
| Output rate ¹⁰⁾ : ¹¹⁾ : | 1 ms/2 ms/4 ms/8 ms/32 ms |
| Light source ¹²⁾ : | Laser, infrared |
| Typ. light spot size (distance): | 15 mm x 15 mm (at 2 m) |

Additional function: Set speed: Super Fast ... Super Slow
 Teach-in of switching output
 IO-Link
 Reset to factory default
 Multifunctional input: laser off/external teach/inactive
 Switching output invertible
 Switching mode: Distance to reflective tape (DtR)/switching window (Wnd)/object between sensor and background (OBSB)

Laser class: 1 (EN 60825-1)
 Laser service life (MTTF at 25 °C): 100,000 h

¹⁾ See characteristic curves repeatability ²⁾ Equivalent to 1σ ^{3) 5)} On reflective tape "Diamond Grade" ⁴⁾ 6 % ... 90 % remission ^{6) 8) 11)} Dependent on the set speed: Super Fast ... Super Slow ^{7) 9)} Lateral entry of object into measuring range ¹⁰⁾ Continuous change of distance in measuring range. ¹²⁾ Wavelength: 827 nm;
 max. output: 130 mW; pulse duration: 3.5 ns; pulse repetition rate: 1/250

Interfaces

Hysteresis ¹⁾: 0 mm ... 34,950 mm
 Data interface: IO-Link
 Multifunctional input (MF) ²⁾: 1 x

¹⁾ Adjustable via IO-Link ²⁾ 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: Connector M12, 5-pin
 Indication: LEDs
 Weight: 65 g

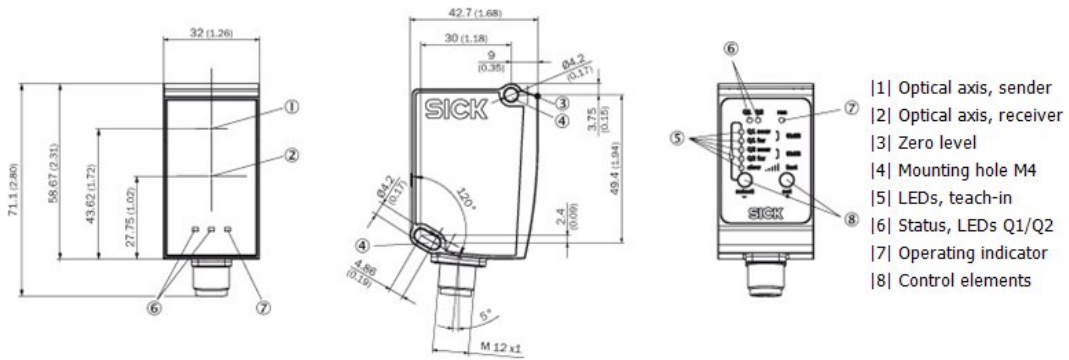
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ When using IO-Link output $V_s > 18$ V. ³⁾ May not fall short of or exceed V_s tolerances ⁴⁾ At 20°C ⁵⁾ Without load

Ambient data

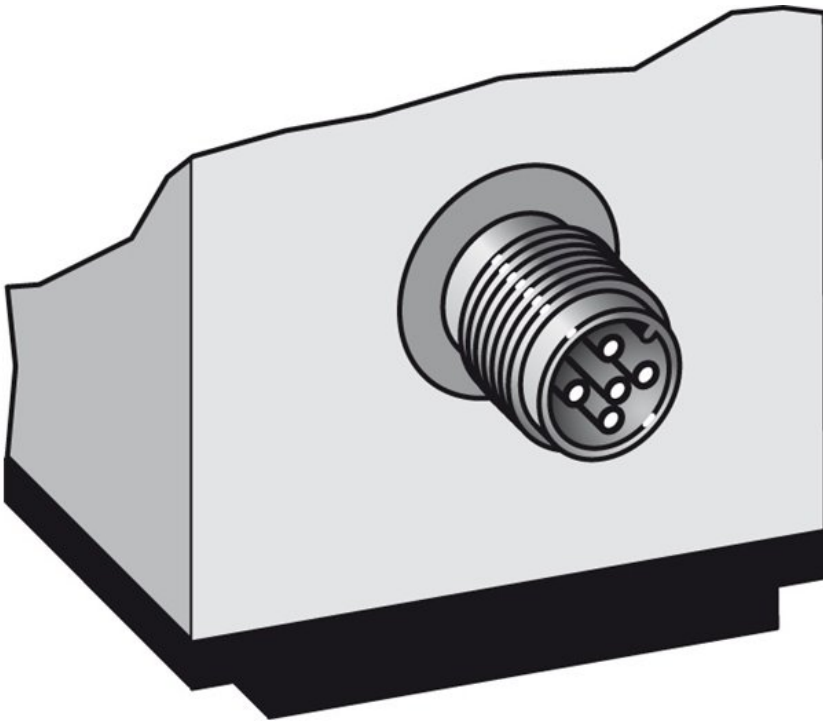
Enclosure rating: IP 65, IP 67
 Protection class: III
 Ambient temperature ¹⁾: Operation: -30 ... 55 °C, Storage: -40 ... 75 °C
 Vibration resistance: EN 60068-2-6/EN 60068-2-64
 Shock resistance: EN 60068-2-27
 Typ. ambient light safety: 40 klx

¹⁾ $U_v \leq 24$ V

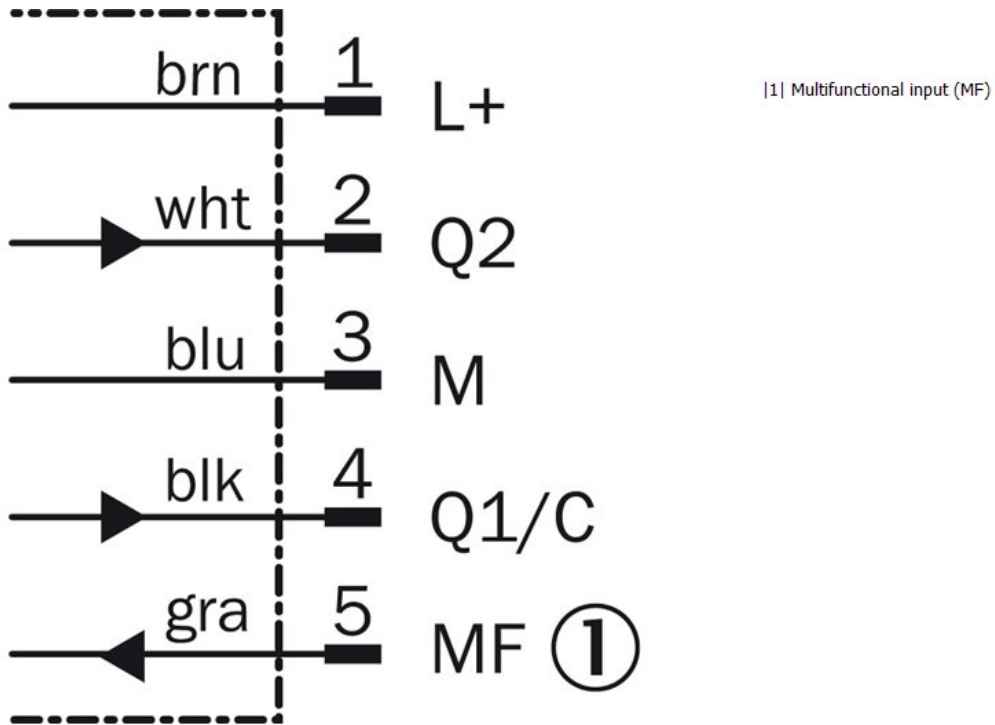
Dimensional drawing



Connection type

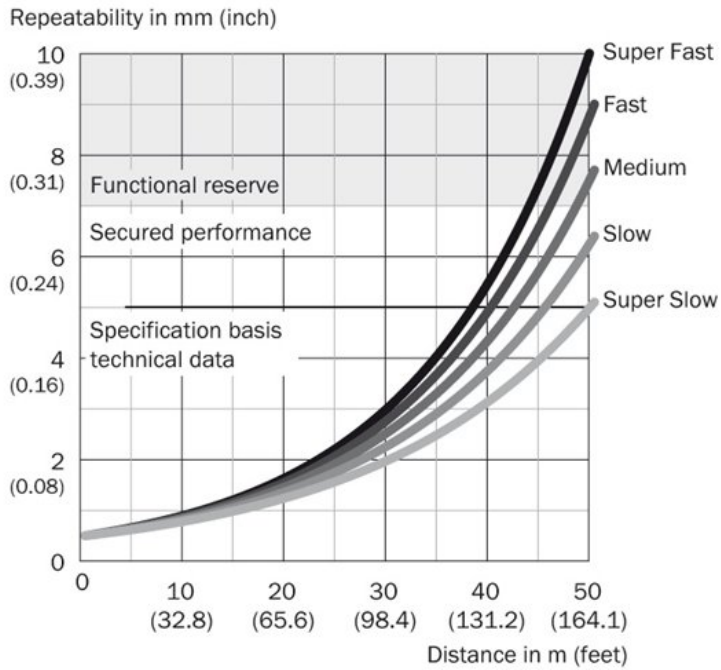


Connection diagram



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

Super Slow ... Super Fast



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