



Mid range distance sensors Dx35, DL35

DL35-B15552



Model Name > [DL35-B15552](#)
Part No. > [1057657](#)



At a glance

- Maximum reliability, immunity to ambient light, and best price/performance ratio thanks to HDDM™ technology
- Large measuring range of 0.2 m to 35 m
- Great repeatability of 0.5 mm to 5 mm
- Fast measurement with a output rate of down to 1 ms
- Small housing size
- IO-Link as well as analog and switching output
- 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
- A broad range of interfaces in one device: 4 mA to 20 mA, 0 V to 10 V, PNP output, NPN output, and IO-Link - minimizing stock keeping
- Fast output rate of down to 1 ms makes fast positioning and increased throughput possible
- 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
- A wide variety of control options, including teach-in by cable, ensures rapid commissioning and fast batch changes
- Low investment costs and high performance levels guarantee a quick return on investment



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
 Output Q2, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output
 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 analog output and invertible analog output
 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

Analog output ¹⁾: 1 x 4 mA ... 20 mA ($\leq 450\ \Omega$)/1 x 0 V ... 10 V ($\geq 50\ \text{k}\Omega$)/-
 Resolution analog output: 12 bit
 Output type ²⁾; ³⁾; ⁴⁾: 1 x/2 x push-pull: PNP/NPN (100 mA), IO-Link
 Hysteresis ⁵⁾: 0 mm ... 34,950 mm
 Data interface: IO-Link

Multifunctional input (MF) ⁶⁾: 1 x

¹⁾ Output Q₂, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output ²⁾ Output Q short-circuit protected ³⁾ Voltage drop < 3 V ⁴⁾ Output Q₂, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output/Q₁ not/ deactivated ⁵⁾ Adjustable via IO-Link ⁶⁾ Response time $\leq 60\ \text{ms}$

Mechanics/electronics

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

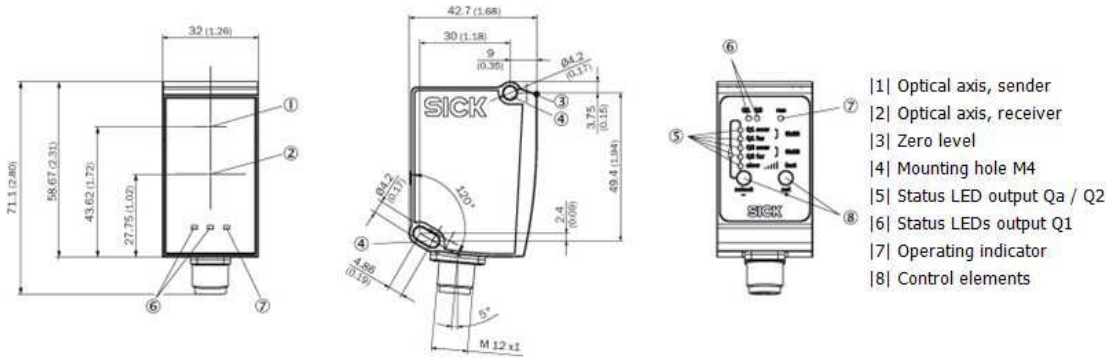
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ When using IO-Link output V_s > 18 V. When using analog voltage output V_s > 13 V. ³⁾ May not fall short of or exceed V_S tolerances ⁴⁾ At 20°C ⁵⁾ Without load

Ambient data

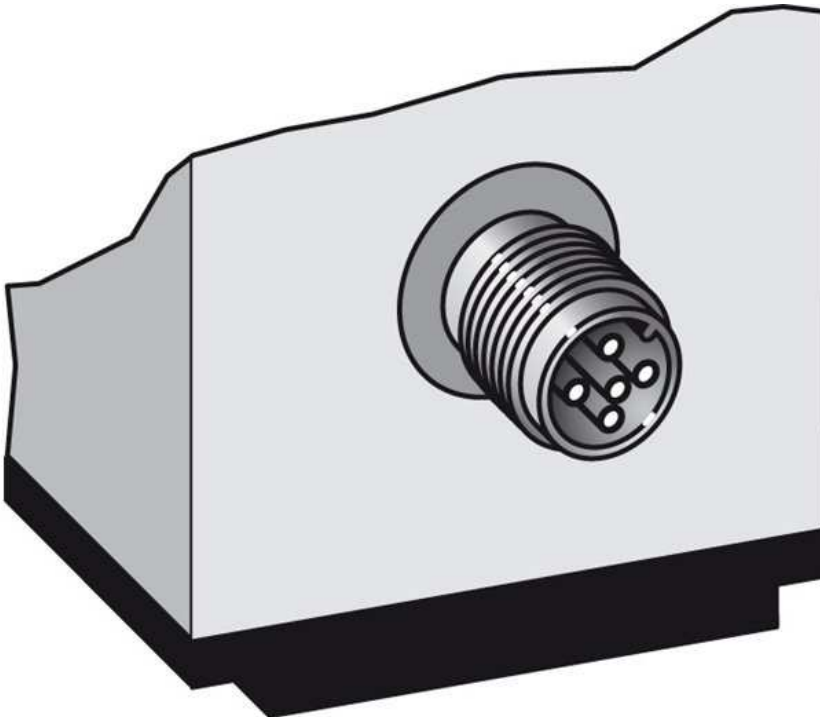
Enclosure rating: IP 65, IP 67
 Protection class: III
 Ambient temperature ¹⁾: Operation: -30 ... +55 °C, Storage: -40 ... +75 °C
 Vibration resistance: EN 60068-2-6/EN 60068-2-64
 Shock resistance: EN 60068-2-27
 Typ. ambient light safety: 40 klx

1) $U_V \leq 24\text{ V}$

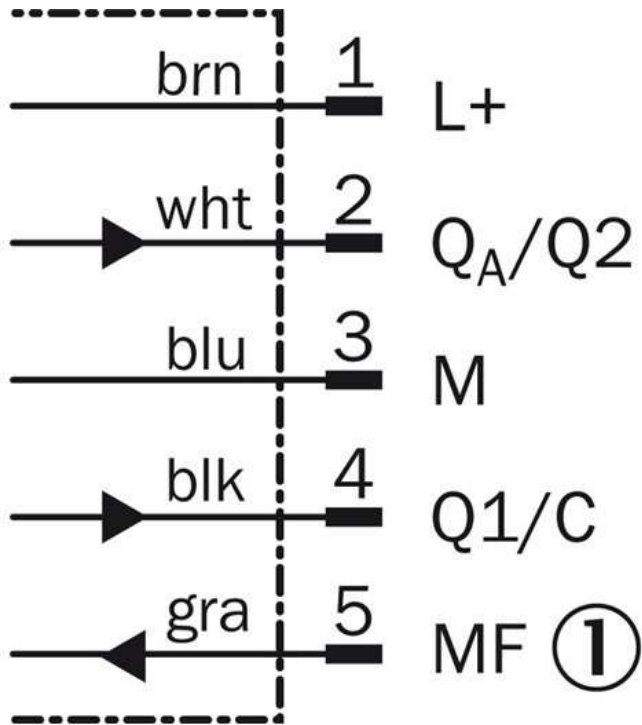
Dimensional drawing



Connection type



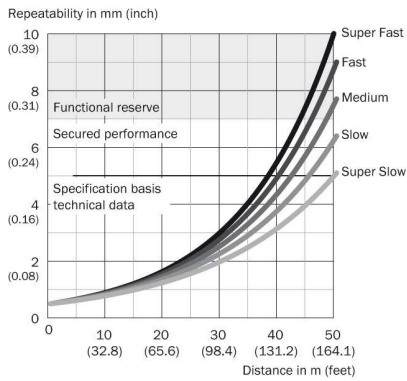
Connection diagram



[1] Multifunctional input (MF)

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

Super Slow ... Super Fast



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