



Mid range distance sensors Dx35, DL35, IO-Link

DL35-B15852



Model Name > **DL35-B15852**
Part No. > **1057658**



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

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 analog output Teach-in of switching output IO-Link Reset to factory default Multifunctional input: laser off/external teach/inactive Output Q2, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output Invertible analog output 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 1 σ ^{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

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
Hysteresis ²⁾ :	0 mm ... 34,950 mm
Data interface:	IO-Link
Multifunctional input (MF) ³⁾ :	1 x

¹⁾ Output Q₂, selectable: 4 mA ... 20 mA/0 V ... 10 V/switching output ²⁾ Adjustable via IO-Link ³⁾ 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:	Connector M12, 5-pin
Indication:	LEDs
Weight:	65 g

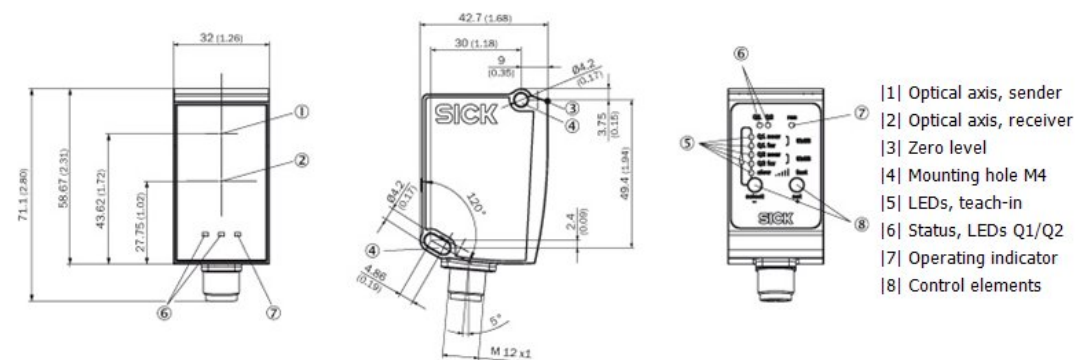
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ When using IO-Link output V_s > 18 V. When using analog voltage output V_s > 13 V. ³⁾ May not fall short of or exceed V_S tolerances ⁴⁾ At 20 °C ⁵⁾ Without load

Ambient data

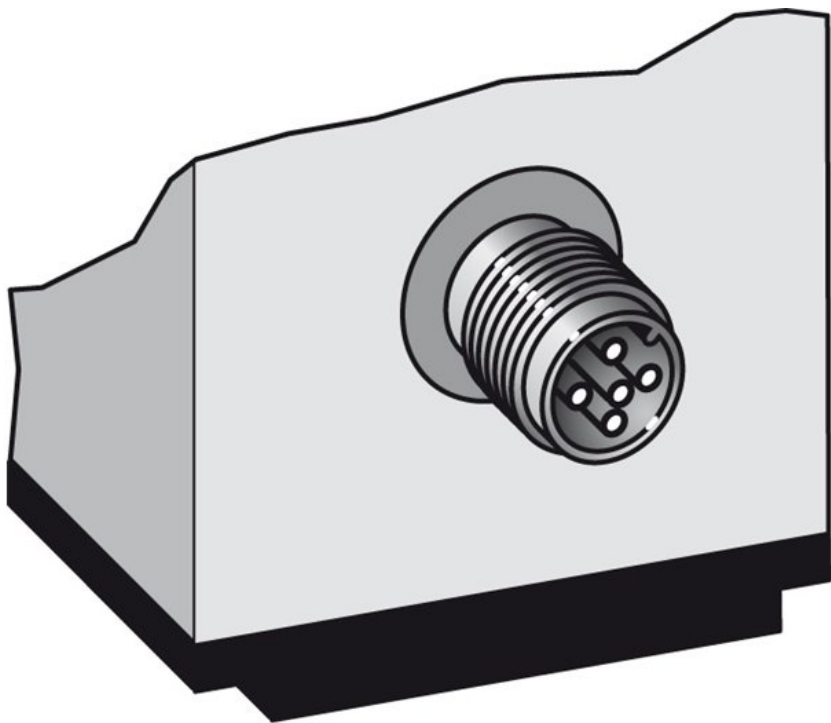
Enclosure rating:	IP 65, IP 67
Protection class:	III
Ambient temperature ¹⁾ :	Operation: -30 ... 55 °C, Storage: -40 ... 75 °C
Vibration resistance:	EN 60068-2-6/EN 60068-2-64
Shock resistance:	EN 60068-2-27
Typ. ambient light safety:	40 klx

¹⁾ U_v $\leq 24 \text{ V}$

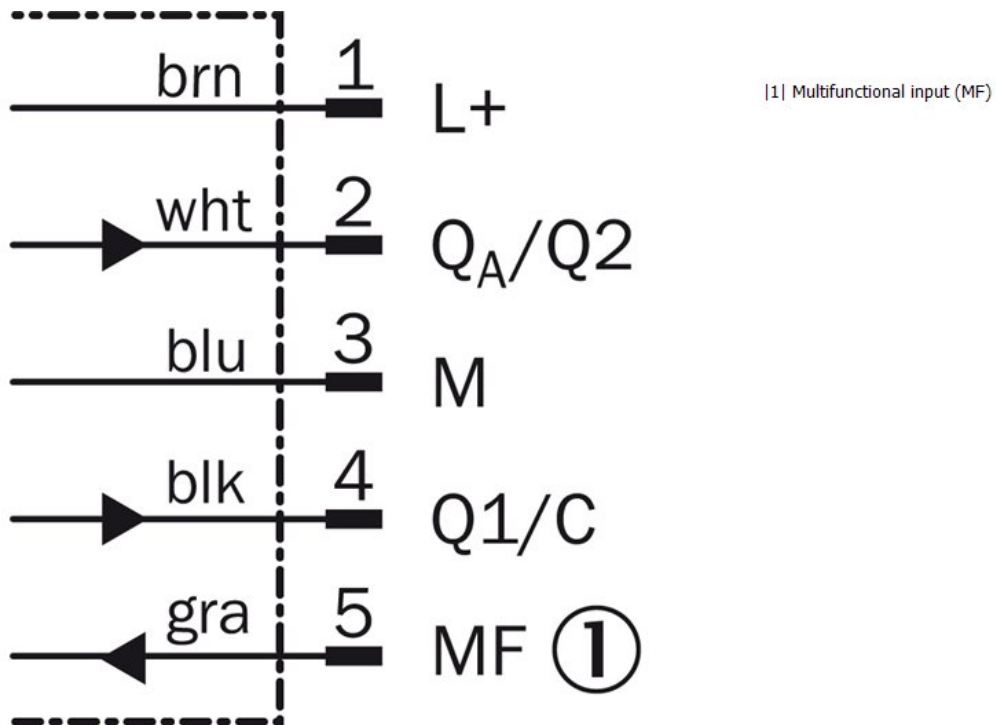
Dimensional drawing



Connection type

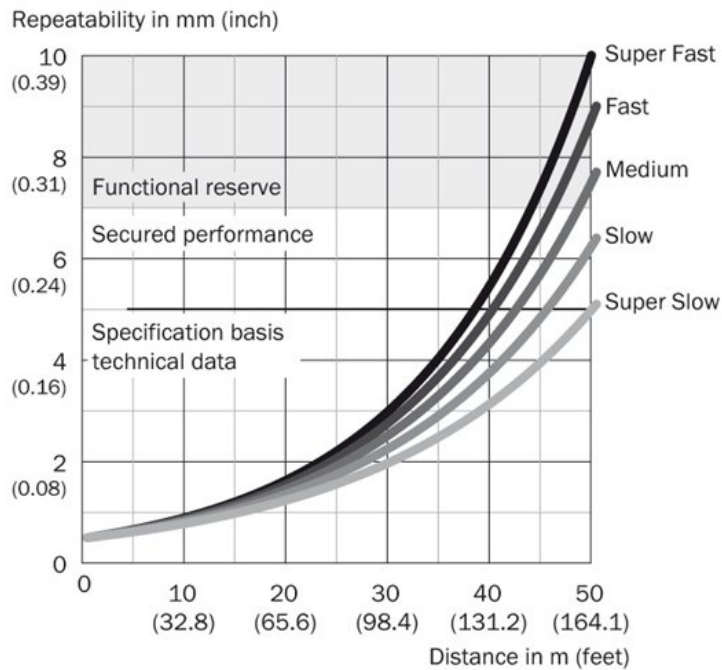


Connection diagram



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

Super Slow ... Super Fast



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