



DT35S-B15251

DT35-S

SAFETY DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DT35S-B15251	1122104

Other models and accessories → www.sick.com/DT35-S



Detailed technical data

Mechanics/electronics

Supply voltage V_s	DC 19.2 V ... 26.4 V ¹⁾
Ripple	$\leq 5 V_{pp}$ ²⁾
Power consumption	$\leq 1.7 W$ ³⁾
Initialization time	≤ 500 ms
Warm-up time	≤ 20 min
Housing material	Plastic (ABS/PC)
Window material	Plastic (PMMA)
Connection type	Male connector, M12, 5-pin
Indication	LEDs
Weight	65 g
Dimensions (W x H x D)	32 mm x 58.67 mm x 42.7 mm
Enclosure rating	IP67
Protection class	III
Electrical safety	IEC 61010-1 (ed. 3)

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ May not fall short of or exceed V_s tolerances.

³⁾ Without load, at +20 °C.

Safety-related parameters

Category	B (EN ISO 13849-1:2015)
Performance level	PL b (EN ISO 13849-1:2015)
Performance class SRS/SRSS	B (IEC TS 62998-1:2019)

¹⁾ 10 years at 50 °C ambient temperature.

T_M (mission time)	20 years (EN ISO 13849-1:2015) ¹⁾
Max. cumulative downtime per year	< 5 min (IEC TS 62998-1)
Conformities	EN ISO 13849-1:2015, IEC TS 62998-1:2019, EN ISO 13482:2014, ANSI/ITSDF B56.5:2012

¹⁾ 10 years at 50 °C ambient temperature.

Performance

Safety-related measuring range	50 mm ... 8,500 mm, 90% remission factor ¹⁾ 50 mm ... 4,500 mm, 20% remission 50 mm ... 3,000 mm, 10% remission 50 mm ... 2,000 mm, 6% remission factor
Target	Natural objects
Resolution	1 mm
Systematic error	< 25 mm ²⁾
Statistical error	< 25 mm ^{2) 3)}
Response time	15 ms ... 50 ms ^{4) 5)}
Light source	Laser, red ⁶⁾ visible red light
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)
Typ. light spot size (distance)	15 mm x 15 mm (at 2 m)
Additional function	Adjustable speed: slow and medium, teach-in of analog output and invertible analog output, Configurable Q ₂ output: current output / digital output, Switching mode: Distance to Object (DtO) / switching window / object between sensor and background (ObSB), teach-in of digital output, Multifunctional input: laser off / deactivated

¹⁾ With the Slow speed setting. No objects will be detected from the measurement origin to a distance of 50 mm.

²⁾ 6% ... 90% remission factor.

³⁾ Corresponds to 4.4 σ .

⁴⁾ Depending on the configured speed and interface.

⁵⁾ Lateral entry of the object into the measuring range.

⁶⁾ Wavelength: 658 nm; max. output: 250 mW; pulse duration: 4 ns; duty cycle: 1/250.

Interfaces

IO-Link	✓, V1.1
Function	Process data
Data transmission rate	38,4 kbit/s (COM2)
Digital output	
Number	1 ... 2 ^{1) 2)}
Type	Push-pull: PNP/NPN
Function	Configurable Q ₂ output: analog output / digital output
Maximum output current I _A	≤ 100 mA
Analog output	
Number	1
Type	Current output
Current	4 mA ... 20 mA, ≤ 450 Ω

¹⁾ Output Q short-circuit protected.

²⁾ Voltage drop < 3 V.

³⁾ Response time ≤ 60 ms.

⁴⁾ Additional SiLink2 Master accessory required.

	Resolution	12 bit
Multifunctional input (MF)		1 x ³⁾
Hysteresis		10 mm 25 mm 50 mm
Interface for parametrization		SOPAS ET ⁴⁾

¹⁾ Output Q short-circuit protected.

²⁾ Voltage drop < 3 V.

³⁾ Response time ≤ 60 ms.

⁴⁾ Additional SiLink2 Master accessory required.

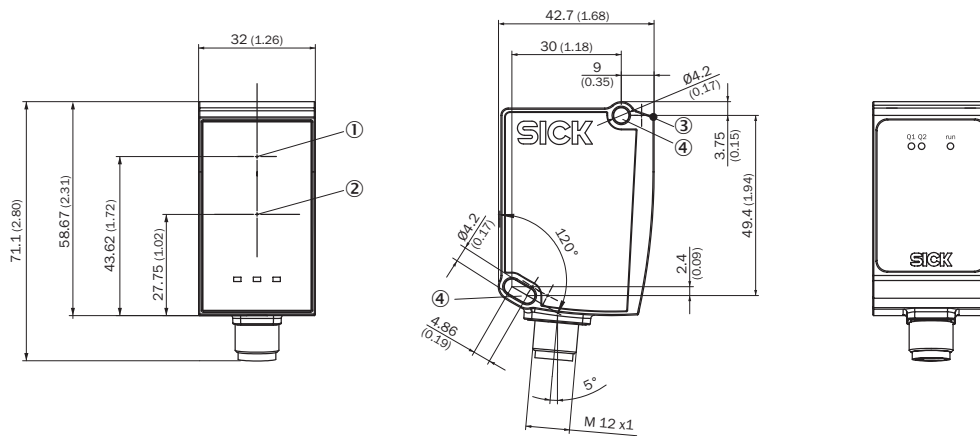
Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3 EN 61000-6-2
Ambient temperature, operation	-25 °C ... +50 °C, U _v ≤ 24 V
Ambient temperature, storage	-40 °C ... +75 °C
Max. rel. humidity (not condensing)	≤ 95 %
Temperature drift	0.5 mm/K
Typ. Ambient light immunity	Direct exposure: 3,000 lx Indirect exposure: 40,000 lx
Vibration resistance	EN 60068-2-6, EN 60068-2-64
Shock resistance	EN 60068-2-27

Classifications

ECLASS 5.0	27270801
ECLASS 5.1.4	27270801
ECLASS 6.0	27270801
ECLASS 6.2	27270801
ECLASS 7.0	27270801
ECLASS 8.0	27270801
ECLASS 8.1	27270801
ECLASS 9.0	27270801
ECLASS 10.0	27270801
ECLASS 11.0	27270801
ECLASS 12.0	27270916
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	411111613

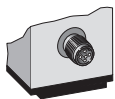
Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Reference surface = 0 mm
- ④ Mounting hole M4

Connection type




Male connector M12, 5-pin



Recommended accessories

Other models and accessories → www.sick.com/DT35-S

	Brief description	Type	Part no.
Connection modules			
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
Universal bar clamp systems			
	Plate N02 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N02	2051608
Mounting brackets and plates			
	Mounting bracket: horizontal sending axis for ceiling or floor installation or vertical sending axis for wall installation, steel, zinc coated, incl. mounting material, steel, zinc coated, mounting hardware for the sensor included	BEF-WN-DX35	2069592
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A15-020VB5XLEAX	2096239

	Brief description	Type	Part no.
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A15-020VB5XLEAX	2096215
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: male connector, M12, 5-pin, straight, A-coded Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m	YF2A15-020UB5M2A15	2096009
Terminal and alignment brackets			
	Alignment unit, steel, zinc coated, mounting hardware for the sensor included	BEF-AH-DX50	2048397

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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