



MULTITASK PHOTOELECTRIC SENSORS

MULTITASK PHOTOELECTRIC SENSORS



Ordering information

RSB1-0669H055140FZ3CZZZP0C 1136748	Туре	Part no.
	RSB1-0669H055140FZ3CZZZP0C	1136748

Included in delivery: BEF-AP-RSBADHB (1)

Other models and accessories -> www.sick.com/Roller_Sensor_Bar

Detailed technical data

Features	
Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Sensing range	
Sensing range min.	2 mm
Sensing range max.	300 mm
Reference object	Object with 90% remission factor (complies with standard white according to DIN 5033)
Recommended sensing range for the best per- formance	2 mm 45 mm
Emitted beam	
Light source	LED
Type of light	Infrared light
Shape of light spot	Point-shaped
Light spot size (distance)	27 mm x 29 mm (45 mm)
Maximum dispersion of the emitted beam around the standardized transmission axis (squint angle)	< +/- 4° (at Ta = +23 °C)
Key LED figures	
LED risk group marking	Free group
Wave length	850 nm
Average service life	100,000 h at T _a = +25 °C
Number of beams	8
Beam separation	55 mm
Distance from 1st beam to leading edge of housing (including end cap)	140 mm
Smallest detectable object (MDO) typ.	
	140 mm (Dependent on distance between beams)
Adjustment	
None	-
Indication	
LED green	Operating indicator
	Static on: power on
LED yellow	Status of received light beam

MULTITASK PHOTOELECTRIC SENSORS

	Static on: object present Static off: object not present		
Special applications	Detecting flat objects, Detecting perforated objects, Detecting objects with position tolerances, Detecting uneven, shiny objects		
Electronics			
Supply voltage U _B	10 V DC 30 V DC		
Ripple	≤ 5 V _{pp}		
Usage category	DC-12 (According to EN 60947-5-2) DC-13 (According to EN 60947-5-2)		
Current consumption	38 mA, without load. At U_B = 24 V		
Protection class	III		
Digital output			
Number	1		
Туре	PNP		
Switching mode	Dark switching		
Signal voltage PNP HIGH/LOW	Approx. U_B -2.5 V / 0 V		
Output current I _{max.}	≤ 100 mA		
Circuit protection outputs	Reverse polarity protected Overcurrent protected Short-circuit protected		
Response time	\leq 1 ms ¹⁾		
Repeatability (response time)	1 ms		
Switching frequency	500 Hz ²⁾		
Pin/Wire assignment			
BN 1	+ (L+)		
WH 2	Not connected		
BU 3	- (M)		
ВК 4	Q		
Function of pin 4/black (BK)	Digital output, dark switching, object present \rightarrow output LOW		

¹⁾ Signal transit time with resistive load.

²⁾ With light/dark ratio 1:1.

Mechanics

Dimensions (W x H x D)	669 mm x 20.3 mm x 17 mm ¹⁾
Connection	Cable with connector M8, 4-pin, with knurled nut $^{2)}$
Connection detail	
Deep-freeze property	Do not bend below 0 °C
Conductor size	0.13 mm ²
Cable diameter	Ø 3.6 mm
Length of cable (L)	300 mm ²⁾
Material	
Housing	Metal, Aluminum (anodised)

 $^{(1)}$ W = length of Roller Sensor Bar (in the installed state).

²⁾ Due to the manufacturing process, the cable can be a little longer.

MULTITASK PHOTOELECTRIC SENSORS

Front screen	Plastic, PMMA
Cable	Plastic, PVC
Male connector	Plastic, PVC
Weight	Approx. 242.8 g
Mounting system type	BEF-AP-RSBADHB, adapter bracket with adhesive back

 $^{(1)}$ W = length of Roller Sensor Bar (in the installed state). $^{(2)}$ Due to the manufacturing process, the cable can be a little longer.

Ambient data

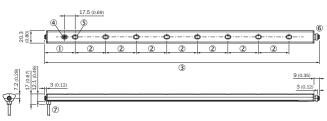
Enclosure rating	IP67 (EN 60529)
Ambient operating temperature	-40 °C +60 °C
Ambient temperature, storage	-40 °C +75 °C
Shock resistance	30 g, 11 ms (3 positive and 3 negative shocks along X, Y, Z axes, 18 total shocks (EN60068-2-27))
Vibration resistance	10 Hz 55 Hz (Amplitude 1 mm, 3 x 30 min (EN60068-2-6))
Air humidity	$15\ \%$ $95\ \%$, relative humidity (no condensation), as per IEC 60947-5-2
Electromagnetic compatibility (EMC)	EN 60947-5-2
UL File No.	NRKH.E189383 & NRKH7.E189383

Classifications

ECLASS 5.0	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

MULTITASK PHOTOELECTRIC SENSORS

Dimensional drawing (Dimensions in mm (inch))



① Distance from 1st beam to leading edge of housing (including end cap)

- ② Beam separation
- ③ Length of Roller Sensor Bar (in the installed state)
- ④ Display and adjustment elements
- ⑤ First beam (number of beams varies depending on the variant)
- Spring loaded end cap (for further information see the installation note)
 Connection

Adjustments

Display and adjustment elements



LED yellow

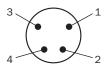
Installation note



(6) Range of motion of the spring loaded end cap (up to 5 mm of compression in uninstalled state)

Connection type

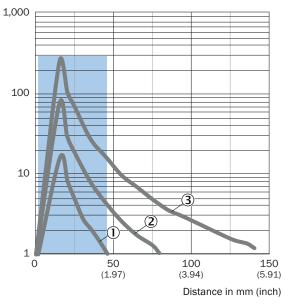
Male connector M8, 4-pin



MULTITASK PHOTOELECTRIC SENSORS

Characteristic curve

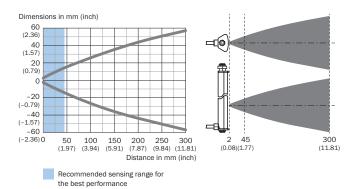




Recommended sensing range for the best performance

- ① Black object, 6% remission factor
- ② Gray object, 18% remission factor
- ③ White object, 90% remission factor

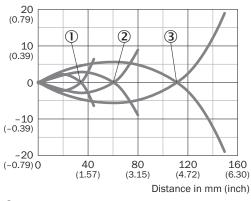
Light spot size



6 PHOTOELECTRIC SENSORS | SICK

MULTITASK PHOTOELECTRIC SENSORS





① Black object, 6% remission factor

② Gray object, 18% remission factor

③ White object, 90% remission factor

Recommended accessories

Other models and accessories -> www.sick.com/Roller_Sensor_Bar

	Brief description	Туре	Part no.
Mounting brac	ckets and plates		
0	8 mm round adapter bracket with adhesive back	BEF-AP-RSBADHA	2127765
	Adapter bracket with adhesive back	BEF-AP-RSBADHB	2127766
8	Adapter bracket to snap between hex sections	BEF-AP-RSBCON	2127768
🚱 🏵	Hex adapter bracket	BEF-AP-RSBHEX	2127767
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	BEF-AP-RSBADHA, BEF-AP-RSBADHB, BEF-AP-RSBCON, BEF-AP-RSBHEX	BEF-AP-RSBKIT	2127759
Others			
	 Connection type head A: Male connector, M8, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm² 	STE-0804-G	6037323
•	 Connection type head A: Female connector, M8, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF8U14- 050VA3XLEAX	2095889

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."

WORLDWIDE PRESENCE:

Contacts and other locations -www.sick.com



Online data sheet

