



EOAS170T-P01

End-of-Arm-Safeguard

SAFETY SYSTEMS FOR ROBOTS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
EOAS170T-P01	1129419

Other models and accessories → www.sick.com/End-of-Arm-Safeguard



Detailed technical data

Features

Functional principle	Time-of-flight measurement
Protective field length (along the longitudinal axis of the EOAS sensor)	100 mm ... 550 mm
Length of detection zone (along the longitudinal axis of the EOAS sensor)	
Close range	50 mm ... 100 mm
Distance range	550 mm ... 700 mm
Protective field angle	14°
Wave length	827 nm (infrared)
Laser class	1 (EN 60825-1)
Robot controller	Universal Robots: UR3e, UR5e, UR7e, UR10e, UR12e, UR16e, UR8L, UR15, UR18, UR20, UR30
Compatible robot software	≥ Polyscope 5.24
Configuration method	System configuration: EOAS URcap via UR Teach Pendant IP address of EOAS sensor: Web server
Response time	110 ms ¹⁾
Resolution	
Minimum object height above work surface (typically table)	97 mm
Typical object height	20 mm ²⁾
Minimum object width	50 mm
Items supplied	1 x EOAS sensor 1 x EOAS flange 1 x cable for voltage supply, 4 m 1 x Ethernet cable for data connection, 4 m 1 x Quickstart Guide EOAS URcap for download
Functions	
Automatic restart	✓

¹⁾ Value applies only to the safety system. The stopping time of the complete system including the robot depends on the selected robot type and other application conditions, e.g., mass of the workpiece. Additional information can be found in the robot documentation.

²⁾ Measurement using a test device on an example setup with a flat metallic work surface and constant ambient conditions.

Safety-related parameters

Performance level	PL c (ISO 13849)
Category	2 (ISO 13849)
SRS performance class (IEC/TS 62998)	C
PFH_D (mean probability of a dangerous failure per hour)	2,92 × 10 ⁻⁶
T_M (mission time)	10 years (ISO 13849)

Electronics

Supply voltage U_e	24 V DC (20.4 V DC ... 28.8 V DC) ¹⁾
Protection class	III (IEC 61140)
Maximum power consumption	≤ 3 W
Maximum cable length	15 m ²⁾

¹⁾ PELV or SELV.

²⁾ Communication and supply voltage.

Mechanics

Dimensions (W x H x D)	EOAS sensor	172 mm x 34 mm x 172 mm
	EOAS flange	69 mm x 34.5 mm x 69 mm (both parts mounted)
Material	Housing	PA2200
	Display LED disk	PMMA
	Front screen	PMMA
	Sheath of the voltage supply cable	PUR
	Sheath of the communication cable	TPE
	Plug of the voltage supply and communication cables	TPU
Weight	EOAS sensor	435 g
	EOAS flange	185 g (both half shells, including screws)

Ambient data

Ambient operating temperature	0 °C ... +50 °C	
Ambient temperature, storage	-10 °C ... +65 °C	
Protection class according to IEC 60529	IP54 (EN60529)	
Vibration resistance	2 g, 10 Hz, 150 Hz (EN 60068-2-6)	
Shock resistance	30 g, 11 ms (EN 60068-2-27)	
Ambient lighting	Operation	≤ 5,000 lx
	Commissioning	≤ 4,000 lx
Electromagnetic compatibility (EMC)	In accordance with EN 61000-6-2, EN 61000-6-3 and 61000-6-7	

Certificates

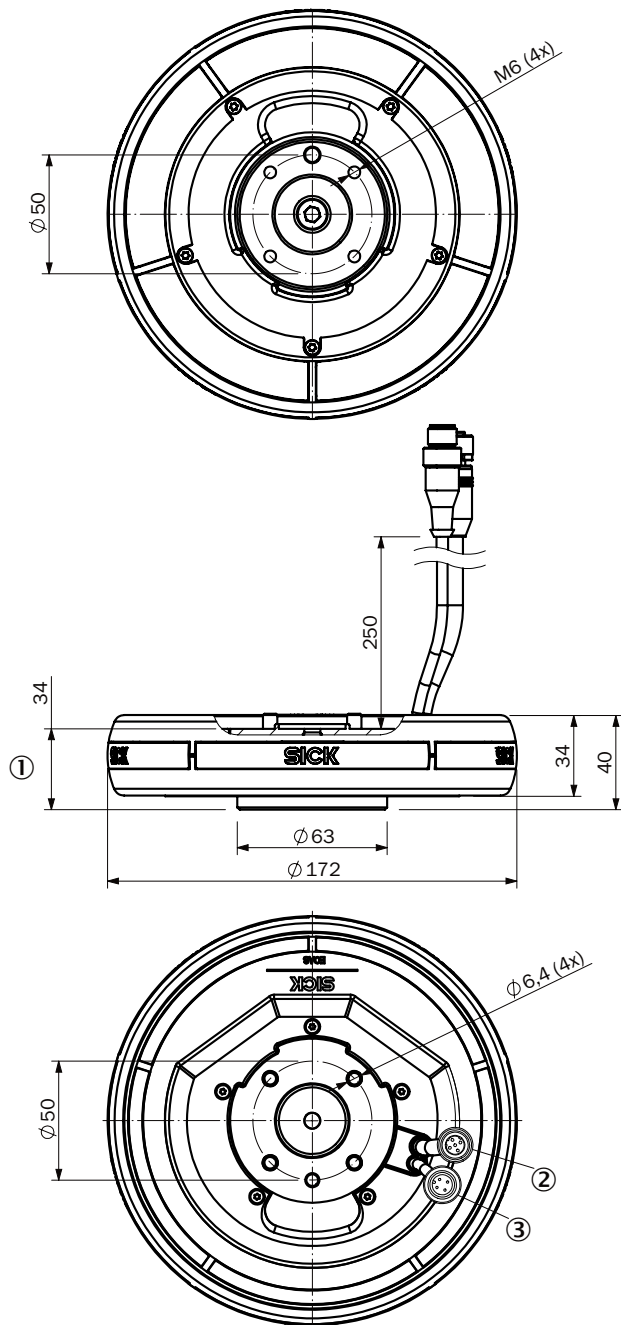
EU declaration of conformity	✓
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UK declaration of conformity	✓
ACMA declaration of conformity	✓
cULus certificate	✓
TÜV approval	✓
TÜV approval annex	✓
EC-Type-Examination approval	✓
Laser safety (IEC 60825-1) certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27279090
ECLASS 5.1.4	27279090
ECLASS 6.0	27279090
ECLASS 6.2	27279090
ECLASS 7.0	27279090
ECLASS 8.0	27279090
ECLASS 8.1	27279090
ECLASS 9.0	27279090
ECLASS 10.0	27279090
ECLASS 11.0	27279090
ECLASS 12.0	27279090
ETIM 5.0	EC001449
ETIM 6.0	EC001449
ETIM 7.0	EC001449
ETIM 8.0	EC001449
UNSPSC 16.0901	32151705

Dimensional drawing



Dimensions in mm (inch)

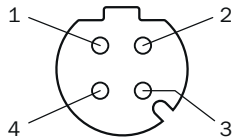
- ① Height of EOAS flange (mounted)
- ② Ethernet cable (M12, socket, 5-pin)
- ③ Supply voltage cable (M12, plug, 4-pin)

Pinouts Supply voltage



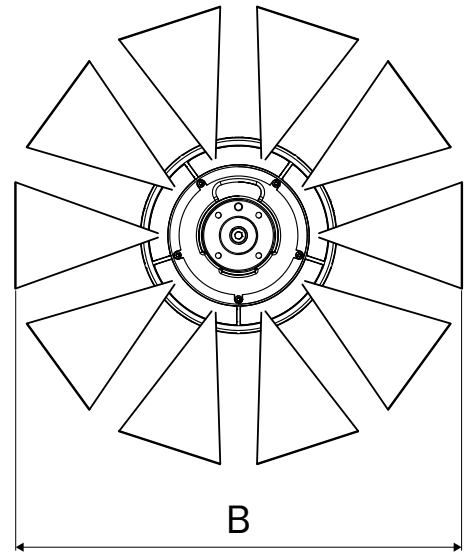
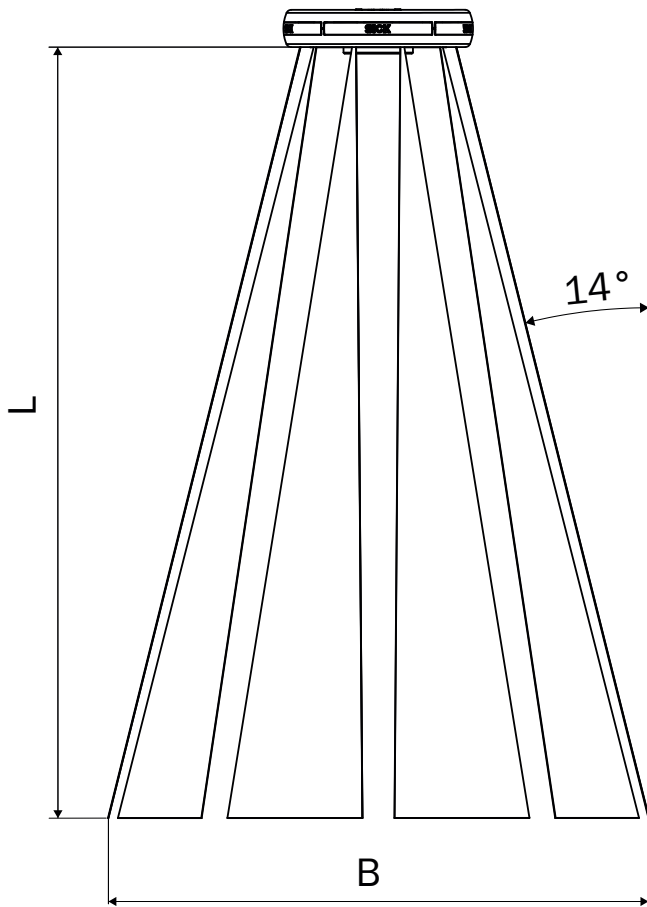
Pin	Designation	Description
1	24 V DC	Supply voltage +24 V DC
2	N/C	Not connected
3	0 V DC	Supply voltage 0 V DC
4	N/C	Not connected
For details see operating instructions		

Pinouts Ethernet



Pin	Designation	Description
1	TX+	Send data +
2	RX+	Receive data +
3	TX-	Send data -
4	RX-	Receive data -
For details see operating instructions		

Functional principle Protective field size



L	B
L	$L/2 + 140 \text{ mm}$
300 mm	290 mm
400 mm	340 mm
500 mm	390 mm
550 mm	415 mm

For details see operating instructions

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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