STR1-SACM0PR8

STR1

NON-CONTACT SAFETY SWITCHES

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	part no.
STR1-SACM0PR8	1112262

Other models and accessories ➜ www.sick.com/STR1

Detailed technical data

Features

System part	Sensor with actuator
Sensor principle	RFID
Number of safe outputs	2
Auxiliary contact (AUX)	1 (switching behavior equivalent to actuator in the protected switch-on state)
Assured switch on distance S_{ao}	10 mm (–30 °C ... +70 °C) [1]
Assured switch off distance S_{ar}	25 mm
Active sensor surfaces	3
Active sensor surface	Top, sides (left, right) [2]
Actuation directions	5
Coding	Universally coded

[1] Values apply for the frontal alignment of the sensor to the actuator. A detailed display of the alignment options and values can be found in the operating instructions.

[2] For details see operating instructions.

Safety-related parameters

Safety integrity level	SIL 3 (IEC 61508)
Category	Category 4 (EN ISO 13849)
Performance level	PL e (EN ISO 13849)
PFH$_D$ (mean probability of a dangerous failure per hour)	$5{,}21 \times 10^{-9}$
T$_M$ (mission time)	20 years (EN ISO 13849)
Type	Type 4 (EN ISO 14119)
Actuator coding level	Low coding level (EN ISO 14119)
Safe state in the event of a fault	At least one safety-related semiconductor output (OSSD) is in the OFF state.

Functions

Safe series connection	In control cabinet (with diagnostics)

Interfaces

Connection type	Cable with plug M12, 8-pin

Length of cable	0.2 m
Long connecting cable	≤ 200 m
Cable diameter	5.5 mm
Conductor cross section	0.12 mm²
Bend radius (with fixed installation)	> 8 x cable diameter
Bend radius (with moving cable)	> 12 x cable diameter
Cable material	PUR
Conductor material	Copper
Coupling nut material	Zinc die-cast, nickel-plated
Display elements	LEDs
Diagnostics indicator	✓
Status display	✓

Electronics

Protection class	III (IEC 61140)
Classification according to cULus	Class 2
Supply voltage V_s	24 V DC (19.2 V DC … 28.8 V DC)
Power consumption	50 mA
Type of output	Self-monitoring semiconductor outputs (OSSDs)
Output current	≤ 100 mA
Response time	40 ms [1]
Release time	100 ms [1] [2]
Risk time	80 ms [1] [3]
Switch-on time	2.5 s [4]

[1] In a safe series connection, each downstream safety switch increases the system response time. More response times can be found in the operating instructions.

[2] Response time on approach to the enable zone.

[3] Detection time for internal oder external faults (e.g., short-circuit or cross-circuit of output signal switching devices). Follow the detailed information in the operating instructions.

[4] The time specified applies to one sensor after the supply voltage has been applied to the safety switch. In a safe series connection, 0.1¬s must be added for each sensor. An additional 0.5¬s per taught-in actuator must be added for uniquely coded and permanently coded sensors.

Mechanics

Dimensions (W x H x D)	40 mm x 18 mm x 26 mm
Weight	69 g
Housing material	VISTAL®

Ambient data

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Enclosure rating	IP67, IP69K (EN 60529, ISO 20653)
Ambient operating temperature	–30 °C … +70 °C
Storage temperature	–30 °C … +70 °C
Vibration resistance	10 Hz … 55 Hz, 1 mm (IEC 60068-2-6)
Shock resistance	30 g, 11 ms (IEC 60068-2-27)
EMC	EN IEC 61326-3-1 EN IEC 60947-5-2 EN IEC 60947-5-3 EN 300330 V2.1.1

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
cULus certificate	✓
TÜV approval	✓
TÜV approval annex	✓
EC-Type-Examination approval	✓

Classifications

ECLASS 5.0	27272403
ECLASS 5.1.4	27272403
ECLASS 6.0	27272403
ECLASS 6.2	27272403
ECLASS 7.0	27272403
ECLASS 8.0	27272403
ECLASS 8.1	27272403
ECLASS 9.0	27272403
ECLASS 10.0	27272403
ECLASS 11.0	27272403
ECLASS 12.0	27274601
ETIM 5.0	EC001829
ETIM 6.0	EC001829
ETIM 7.0	EC001829
ETIM 8.0	EC001829
UNSPSC 16.0901	39122205

## Dimensional drawing "Compact" actuator

Dimensions in mm (inch)
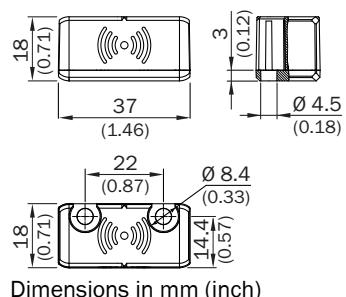
Dimensional drawing Sensor with cable and male connector
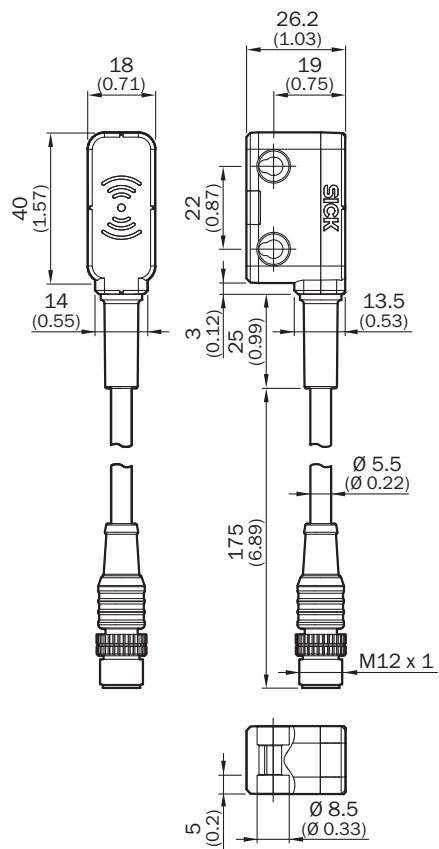
Dimensions in mm (inch)

Pinouts
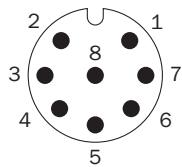
1	Enable input for OSSD 2
2	Voltage supply 24 V DC
3	OSSD 1
4	OSSD 2
5	Aux output (not safe)
6	Enable input for OSSD 1
7	Voltage supply 0 V DC
8	Not connected

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:

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