Data sheet

i110-E0354

i110 Lock

SAFETY LOCKING DEVICES

SICK
Sensor Intelligence.

actuator not supplied with delivery

Ordering information

Type	part no.
i110-E0354	6053945

Other models and accessories ➜ www.sick.com/i110_Lock

Detailed technical data

Features

Sensor principle	Electro-mechanical
Locking principle	Power to lock
Positive action N/C solenoid monitoring contacts	1
N/O solenoid monitoring contacts	0
Positive action N/C door monitoring contacts	2
N/O door monitoring contacts	0
N/C contact for door monitoring	0
Locking force F_{max}	2,500 N (EN ISO 14119) [1]
Locking force F_{Zh}	2,000 N (EN ISO 14119) [2]
Actuation force	≥ 35 N
Retaining force	≤ 30 N
Actuation frequency	≤ 1,200 /h
Actuation directions	5
Approach speed	≤ 20 m/min
For process protection only	✓

[1] 1500 N with angled actuator.
[2] 1150 N with angled actuator.

Safety-related parameters

B_{10d} parameter	5 x 10^6 switching cycles (with small load)
Type	Type 2 (EN ISO 14119)
Actuator coding level	Low coding level (EN ISO 14119)
Safe state in the event of a fault	The switch has no internal fault detection and is unable to assume a safe state in the event of a fault. Fault detection is performed by the connected safety-related logic unit.

Functions

Safe series connection	With Flexi Loop (with diagnostics)

Interfaces

Connection type	Plug connector, M12, 8-pin
Coupling nut material	Brass

Electronics

Contamination rating	3
Switching principle	Slow action switching element
Usage category	AC-15/DC-13 (IEC 60947-5-1)
Rated operating current (voltage)	1 A (24 V AC) 1 A (24 V DC)
Rated insulation voltage U_i	30 V
Rated impulse withstand voltage U_{imp}	1,500 V
Type of output	Electro-mechanical contacts
Power consumption	≤ 8 W
Short-circuit protection	1 A gG
Switching voltage	≥ 12 V DC
Switching current (switching voltage)	1 mA (24 V DC)
Switch-on time of magnet	100 %
Locking principle	Power to lock

Mechanics

Weight	0.5 kg
Housing material	Glass-fiber reinforced thermoplastic
Actuator head material	Metal
Mechanical life	1 x 10^6 switching cycles

Ambient data

Enclosure rating	IP67 (IEC 60529)
Ambient operating temperature	–20 °C ... +55 °C
Storage temperature	–20 °C ... +55 °C

Certificates

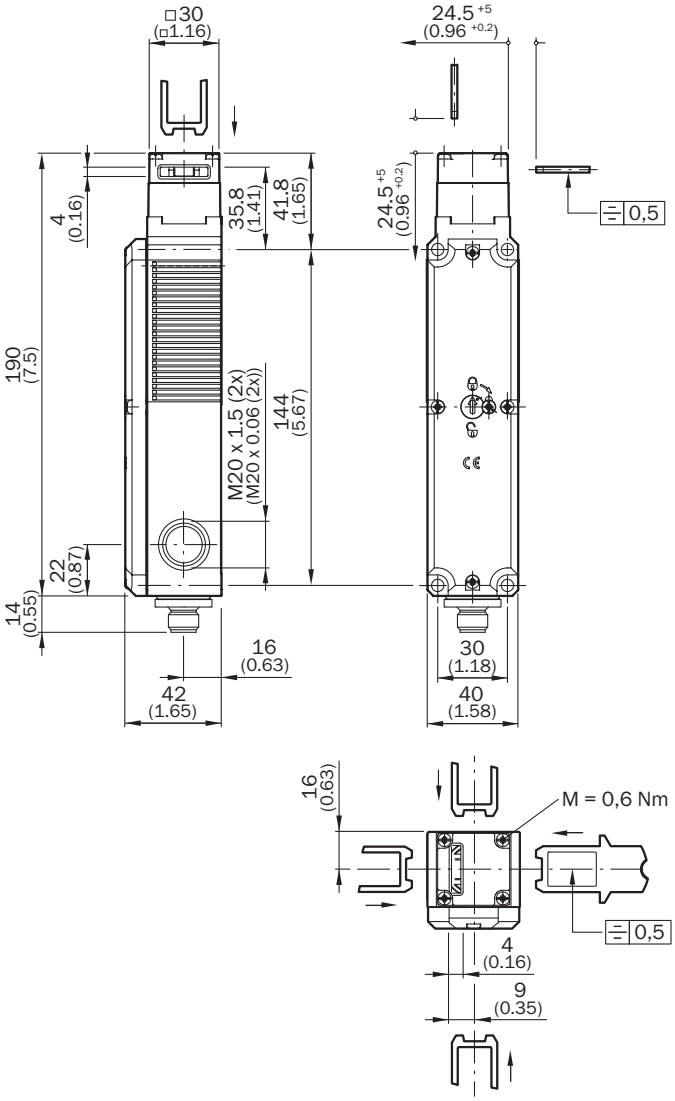
EU declaration of conformity	✓
UK declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

ECLASS 5.0	27272603
ECLASS 5.1.4	27272603
ECLASS 6.0	27272603
ECLASS 6.2	27272603

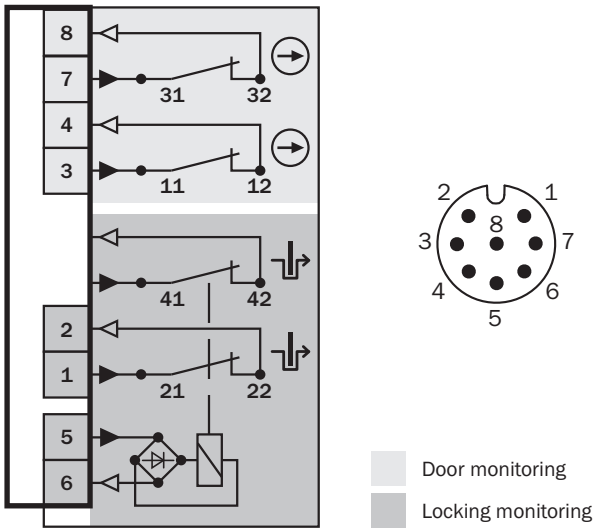
ECLASS 7.0	27272603
ECLASS 8.0	27272603
ECLASS 8.1	27272603
ECLASS 9.0	27272603
ECLASS 10.0	27272603
ECLASS 11.0	27272603
ECLASS 12.0	27272603
ETIM 5.0	EC002593
ETIM 6.0	EC002593
ETIM 7.0	EC002593
ETIM 8.0	EC002593
UNSPSC 16.0901	39122205

Dimensional drawing

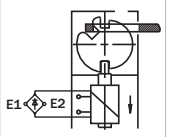
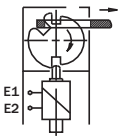
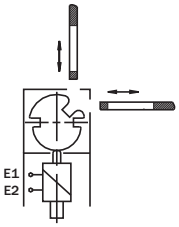


Dimensions in mm (inch)

Pinouts



Switching elements

	Actuator inserted		Actuator removed
	locked	unlocked	
			
Switching element 23	41 42 33 34 21 22 11 12	41 42 33 34 21 22 11 12	41 42 33 34 21 22 11 12
Switching element 25	41 42 31 32 21 22 13 14	41 42 31 32 21 22 13 14	41 42 31 32 21 22 13 14
Switching element 31	41 42 31 32 21 22 13 14	41 42 31 32 21 22 13 14	41 42 31 32 21 22 13 14
Switching element 45	41 42 31 32 21 22 11 12	41 42 31 32 21 22 11 12	41 42 31 32 21 22 11 12

Positive action N/C locking monitoring contact
Positive action N/C door monitoring contact

Switching element 23:
2 positive action N/C contacts + 1 N/O contact (Locking monitoring)
1 N/C contact (Door monitoring)

Switching element 25:
2 positive action N/C contacts (Locking monitoring)
1 N/C contact + 1 N/O contact (Door monitoring)

Switching element 31:
2 positive action N/C contacts (Locking monitoring)
1 positive action N/C + 1 N/O contact (Door monitoring)

Switching element 45:
2 positive action N/C contacts (Locking monitoring)
2 positive action N/C contacts (Door monitoring)

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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.

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For us, that is “Sensor Intelligence.”

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