



i110-M0453

i110 Lock

SAFETY LOCKING DEVICES

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|------------|----------|
| i110-M0453 | 6051600 |

The actuator has to be ordered separately. See "Accessories" for further details.

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

actuator not supplied with delivery



Detailed technical data

Features

| | |
|---|--------------------------------------|
| Sensor principle | Electro-mechanical |
| Locking principle | Power to release |
| Positive action N/C solenoid monitoring contacts | 2 |
| N/O solenoid monitoring contacts | 0 |
| Positive action N/C door monitoring contacts | 2 |
| N/O door monitoring contacts | 0 |
| Number of N/C door monitoring contacts | 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 |

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 connections | None, only individual wiring (with diagnostics) |
|--------------------------------|---|

Interfaces

| | |
|-------------------------|--|
| Connection type | Cable gland, 3 x M20 |
| Conductor cross section | 0.34 mm ² ... 1.5 mm ² |

Electrical data

| | |
|--|---------------------------------|
| Contamination rating | 3 |
| Switching principle | Slow action switching element |
| Usage category | AC-15/DC-13 (IEC 60947-5-1) |
| Rated operating current (voltage) | 4 A (230 V AC) 4 A (24 V DC) |
| Rated insulation voltage U_i | 250 V |
| Rated impulse withstand voltage U_{imp} | 1,500 V AC |
| Type of output | Electro-mechanical contacts |
| Power consumption | ≤ 8 W |
| Short-circuit protection | 4 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 release |

Mechanical data

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

Ambient data

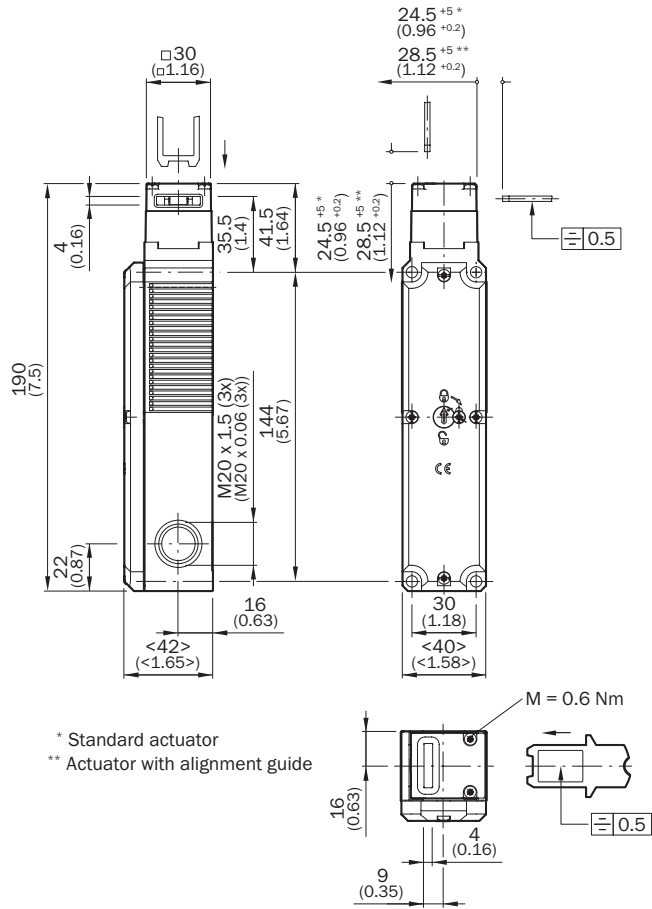
| | |
|--------------------------------------|-------------------|
| Enclosure rating | IP67 (IEC 60529) |
| Ambient operating temperature | -20 °C ... +55 °C |
| Storage temperature | -20 °C ... +55 °C |

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))



Switching elements

| | Actuator inserted | | Actuator removed |
|-----------------------------|-------------------|----------|------------------|
| | locked | unlocked | |
| Switching element 23 | | | |
| Switching element 25 | | | |
| Switching element 31 | | | |
| Switching element 45 | | | |

⬇ 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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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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