



DATA SHEET

# i110-RA123

i110R  
Electro-mechanical safety switches

# SICK

Sensor Intelligence



ELECTRO-MECHANICAL SAFETY SWITCHES

i110-RA123

ORDERING INFORMATION

| Type       | part no. |
|------------|----------|
| i110-RA123 | 6025109  |

Further device versions and accessories at [www.sick.com/i110R](http://www.sick.com/i110R)



DETAILED TECHNICAL DATA

FEATURES

|                              |                        |
|------------------------------|------------------------|
| Sensor principle             | Electro-mechanical     |
| Positive action N/C contacts | 1                      |
| N/O contacts                 | 1                      |
| Actuation frequency          | ≤ 6,000 /h             |
| Actuation torque             | ≥ 0.34 Nm              |
| Actuation directions         | 4                      |
| Approach speed               | 0.1 m/min ... 15 m/min |
| Positive break angle         | 54°                    |

SAFETY-RELATED PARAMETERS

|                                    |                                                                                                                                                                                   |
|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| B <sub>10d</sub> parameter         | 2 x 10 <sup>6</sup> switching cycles (with small load)                                                                                                                            |
| Type                               | Type 1 (EN ISO 14119)                                                                                                                                                             |
| Actuator coding level              | Uncoded (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 | None, only individual wiring (with diagnostics) |
|------------------------|-------------------------------------------------|

INTERFACES

|                         |                       |
|-------------------------|-----------------------|
| Connection type         | Cable gland, 1 x M20  |
| Conductor cross section | ≤ 2.5 mm <sup>2</sup> |

ELECTRONICS

|                     |                               |
|---------------------|-------------------------------|
| Switching principle | Snap action switching element |
|---------------------|-------------------------------|

|                                           |                                 |
|-------------------------------------------|---------------------------------|
| Usage category                            | AC-15/DC-13 (IEC 60947-5-1)     |
| Rated operating current (voltage)         | 3 A (240 V AC)<br>3 A (24 V DC) |
| Rated insulation voltage $U_i$            | 250 V                           |
| Rated impulse withstand voltage $U_{imp}$ | 2,500 V AC                      |
| Short-circuit protection                  | F15                             |
| Switching voltage                         | $\geq 5$ V DC                   |
| Switching current (switching voltage)     | 5 mA (5 V DC)                   |

MECHANICS

|                   |                                   |
|-------------------|-----------------------------------|
| Weight            | 0.52 kg                           |
| Material          |                                   |
| Housing           | Zinc diecast                      |
| Surface treatment | Varnished                         |
| Mechanical life   | $10 \times 10^6$ switching cycles |

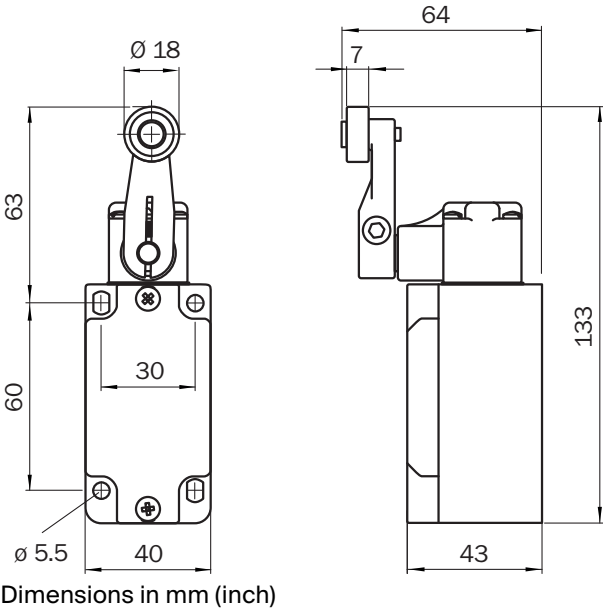
AMBIENT DATA

|                               |                   |
|-------------------------------|-------------------|
| Enclosure rating              | IP66 (IEC 60529)  |
| Ambient operating temperature | -25 °C ... +80 °C |
| Storage temperature           | -25 °C ... +80 °C |

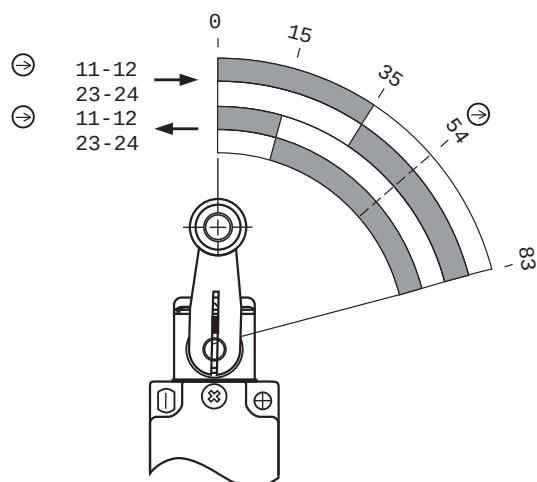
CERTIFICATES

|                              |   |
|------------------------------|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| cULus certificate            | ✓ |
| TÜV approval                 | ✓ |
| TÜV approval annex           | ✓ |

DIMENSIONAL DRAWING



# ACTUATOR TRAVEL DIAGRAM



- ☐ Contacts open
- ☒ Contacts closed

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/6025109](http://www.sick.com/6025109)



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# SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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