

SLC Keyed Interlock Safety Switches

The new generation of safe mechanical interlock switches



The safe solution

Safety switches with keyed interlock such as the SLC ensure that safety grilles, doors and other covers remain closed as long as a dangerous condition persists.

An interlocking device with a safety control combines two safety functions in one product:

1. Monitoring of the door position (interlock)
2. Monitoring of the safety control

User-friendly and cost-effective

The coded SLC is a product evolution with many optimized functions.

Mechanically stressed components - such as the rotating head - are made of metal. This makes it extremely sturdy and durable. The plastic housing, on the other hand, is light and functional.

A variant with M12 plug connector allows a particularly simple connection to the machine. Another user-friendly feature is the possibility of flexible contact assembly.

The contact combination of NC and NO contacts for monitoring the door position (interlock) and the safety control can be selected / combined when ordering.

If it is necessary to open the safety control when the machine is switched off - for maintenance work, SLC switches are equipped with an auxiliary release as standard, which can be operated with an Allen key.

Features:

- Flexible contact assembly
- Integrated manual release
- Five actuating positions
- Rotatable head (4 × 90°)
- Fail-safe locking system
- Optional emergency release
- Optional escape release
- Optional M12 connector
- **2 locking options:**
 - Spring-To-Lock
Locked by spring force.
To unlock, the solenoid needs to be energized.
 - Power-To-Lock
Locked by energized solenoid.
To unlock, the energy needs to be switched off.



SLC safety switch show with SLC Sliding Handle Actuator

Specifications:

- **Electrical data**

Contacts:

Rated operational voltage U_e : 240 V AC / 24 V DC Utilization category:
 AC-15, U_e / I_e 240 V AC / 1,5 A (B300)
 DC-13, U_e / I_e 24 V DC / 1,5 A; 250 V / 0,11 A (R300)

Solenoid:

Operating voltage: 24 V AC / DC or 120 V AC or 230 V AC

- **Mechanical data**

Body: Thermoplastic, fibreglass reinforced (UL 94-V0)

Head: Metal

Latching force: 1500 N (EN ISO 14119)

Operating temperature: -25 to +55 °C

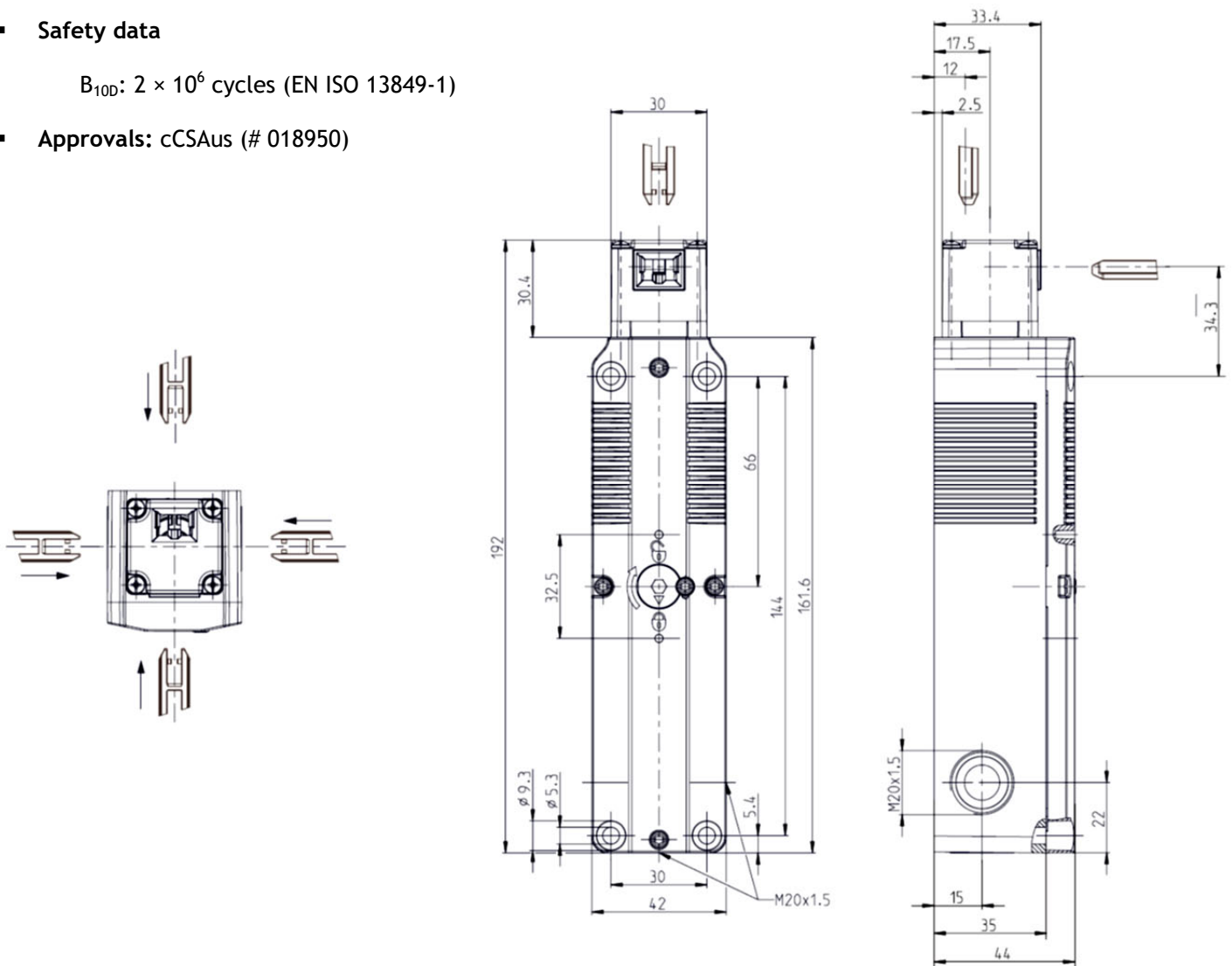
Switching: 4 slow-action-contacts

IP Rating: IP67

- **Safety data**

B_{10D} : 2×10^6 cycles (EN ISO 13849-1)

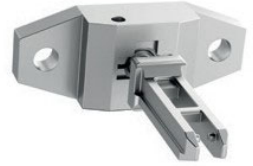
- **Approvals:** cCSAus (# 018950)



SLC Modular concept



Straight actuator (ACS-1)
Standard model actuator.



Rotating Actuator ACR-1
Radius actuator - for use with small actuating radii.



Floating actuator (ACF-1)
Designed to compensate for a slight vertical/horizontal offset.



90 deg Actuator (ACC-1)
for vertical / horizontal mounting.

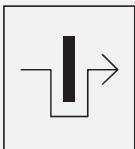


Manual release (standard)
Possibility of manually unlocking the switch using a tool - for example for maintenance work.

2 locking options:

Spring-To-Lock
Safety Control locked by spring force. To unlock, the solenoid needs to be energized.

Power-To-Lock
Safety Control locked by energized solenoid. To unlock, the energy needs to be switched off.



New symbol according to ISO 14119 for the interlocking contact

Contacts labelled with this symbol monitor the Safety Control locking position. Since the SLC is a fail-safe locking switch, it is sufficient to integrate only these into the safety circuit.



In addition to the manual release, the SLC offers further functions that enable quick intervention if required



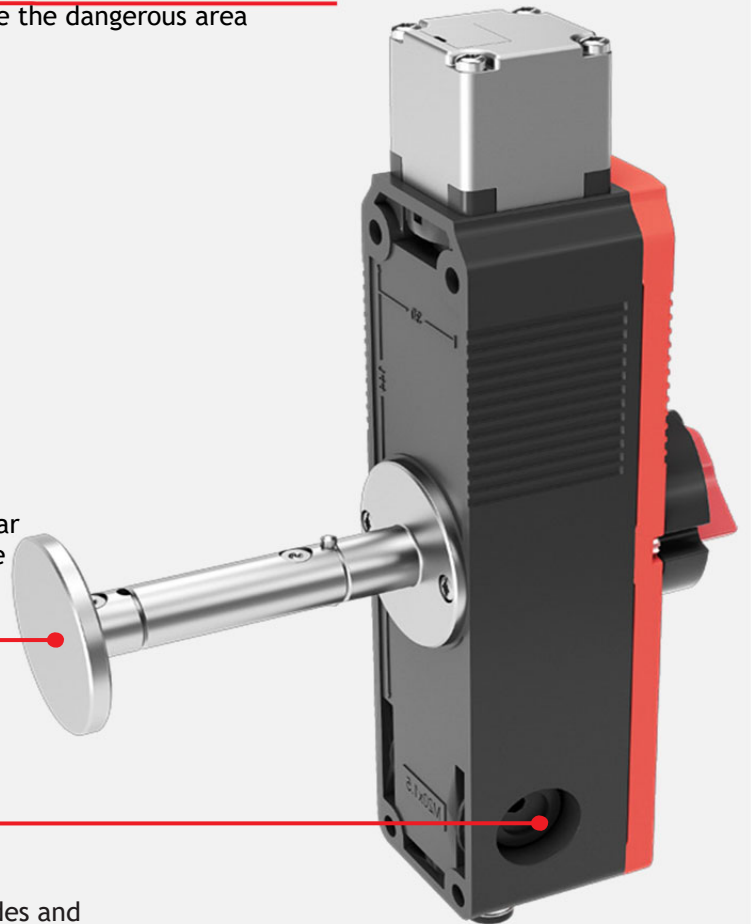
Emergency release

As a ready-to-use switch or as an accessory, mounted on the front of the SLC, enables immediate opening from outside the dangerous area



Escape release

Optionally mounted on the rear of the SLC, the escape release enables immediate opening from within the dangerous area



M20 side entries

Possible on the sides and bottom

M12 connector

Available on bottom entry



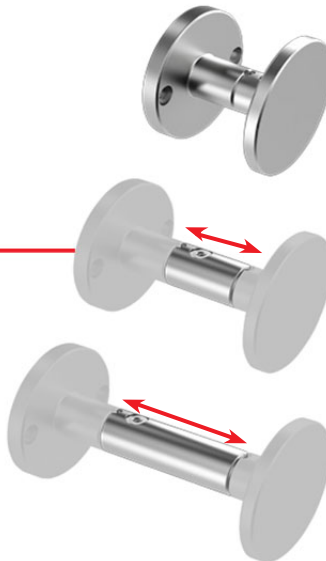
Emergency and escape releases



Emergency release
for immediate opening
from outside the danger
area in case of an emergency



Escape release
enables immediate opening
from inside the dangerous
area in case of an emergency



**Escape release
basic set
ESCR-B-1**

**Extension module *
20mm
ESCR-20-1**

**Extension module *
40mm
ESCR-40-1**

* Extension modules require the basic set ESCR-B-1

SLC Sliding Handle Actuator

The handle for the SLC combines various functions:

- Ergonomic handle to open the door
- Prevents lateral forces onto the switch head
- Prevents using the switch head as an end stop
- Guarantees optimum actuator insertion

These features simplify fault exclusion and enable **PL d** (*) to be achieved in the door monitoring and locking function.

The version with escape release (BF1-SLC ES) includes an additional handle, which allows opening the door from within the danger area when using the function. This requires at least the basic set (ESCR-B).



* **PL d**: Probability of failure between 10^{-7} and 10^{-6} per hour

Ordering SLC switches and Accessories

SLC keyed interlock safety switch (Order by Part No.)

Part No.	Model	Lock Type	Solenoid Voltage	Contact configuration		Emergency Release	Connection type
				Keyed / Actuator	Safety Control / Solenoid		
BE601.8200.001	SLC-F-024-11/11-R4	Spring	24 V AC/DC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread
BE601.8200.007	SLC-F-024-20/20-R4	Spring	24 V AC/DC	2 NC	2 NC	No	M20 Thread
BE601.8200.008	SLC-F-024-11/20-R4	Spring	24 V AC/DC	1 NC / 1 NO	2 NC	No	M20 Thread
BE601.8200.009	SLC-F-024-20/11-R4	Spring	24 V AC/DC	2 NC	1 NC / 1 NO	No	M20 Thread
BE601.8200.010	SLC-F-024-10/21-R4	Spring	24 V AC/DC	1 NC	2 NC / 1 NO	No	M20 Thread
BE601.8200.011	SLC-F-024-10/30-R4	Spring	24 V AC/DC	1 NC	3 NC	No	M20 Thread
BE601.8200.012	SLC-F-024-30/10-R4	Spring	24 V AC/DC	3 NC	1 NC	No	M20 Thread
BE601.8200.013	SLC-F-024-11/11-R6	Spring	24 V AC/DC	1 NC / 1 NO	1 NC / 1 NO	Yes	M20 Thread
BE601.8200.014	SLC-F-024-20/20-R6	Spring	24 V AC/DC	2 NC	2NC	Yes	M20 Thread
BE601.8200.018	SLC-F-024-10/20-R4-01	Spring	24 V AC/DC	1 NC	2NC	No	M12, 8-pin
BE601.8200.019	SLC-F-024-10/11-R4-01	Spring	24 V AC/DC	1 NC	1 NC / 1 NO	No	M12, 8-pin
BE601.8200.020	SLC-F-024-11/10-R4-01	Spring	24 V AC/DC	1 NC / 1 NO	1 NC	No	M12, 8-pin
BE601.8200.021	SLC-F-024-10/11-R6-01	Spring	24 V AC/DC	1 NC	1 NC / 1 NO	Yes	M12, 8-pin
BE601.8200.022	SLC-F-024-10/20-R4-11	Spring	24 V AC/DC	1 NC	2NC	No	M12, 8-pin
BE601.8200.002	SLC-M-024-11/11-R4	Power	24 V AC/DC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread
BE601.8200.015	SLC-M-024-20/11-R4	Power	24 V AC/DC	2 NC	1 NC / 1 NO	No	M20 Thread
BE601.8200.016	SLC-M-024-11/20-R4	Power	24 V AC/DC	1 NC / 1 NO	2 NC	No	M20 Thread
BE601.8200.017	SLC-M-024-20/20-R4	Power	24 V AC/DC	2 NC	2 NC	No	M20 Thread
BE601.8200.003	SLC-F-120-11/11-R4	Spring	120 V AC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread
BE601.8200.005	SLC-F-230-11/11-R4	Spring	230 V AC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread
BE601.8200.004	SLC-M-120-11/11-R4	Power	120 V AC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread
BE601.8200.006	SLC-M-230-11/11-R4	Power	230 V AC	1 NC / 1 NO	1 NC / 1 NO	No	M20 Thread

Information subject to change without notice

Accessories: Actuators / emergency releases / sliding handles (Order by Part No.)

Part No.	Model	Description
BE391.1742.390	ACS-1	Straight actuator; stainless steel; min actuating radius: 800mm
BE391.1742.391	ACF-1	Floating actuator; stainless steel / GD-Zn; min actuating radius: 400mm
BE391.1742.392	ACC-1	90-degree actuator; stainless steel; min actuating radius: 600mm
BE391.1742.398	ACR-1	Rotating actuator; stainless steel; min actuating radius: 150mm
BE605.1101.003	EMR-F-1	Emergency release front; black/red
BE605.1101.004	EMR-B-1	Emergency release BACK; black/red
BE605.1201.005	ESCR-B-1	Escape release; basic set
BE605.1201.007	ESCR-20-1	Extension module for escape release; 20mm
BE605.1201.006	ESCR-40-1	Extension module for escape release; 40mm
BE605.0101.002	BF1-SLC	Sliding handle for SLC
BE605.1201.008	BF1-SLC-ES	Sliding handle for SLC with escape release

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