



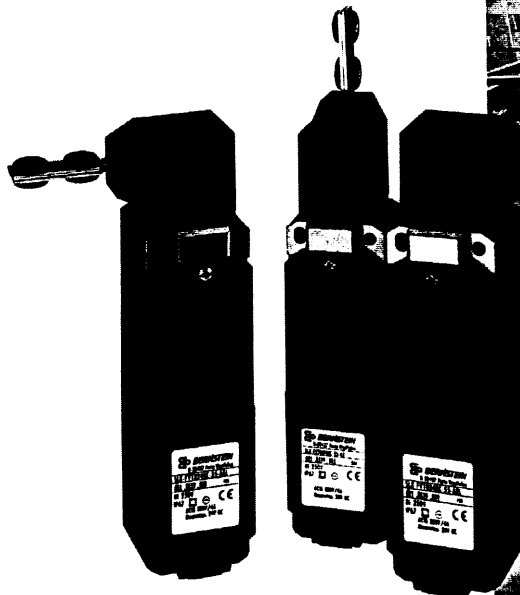
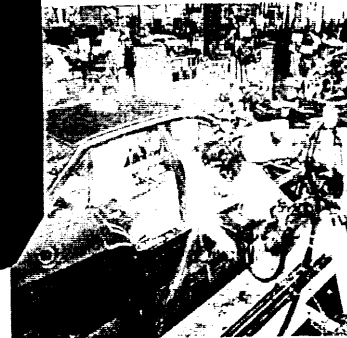
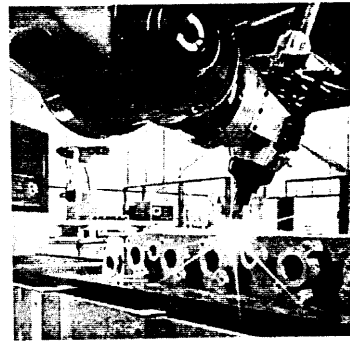
BERNSTEIN

331-739

SAFELOCK^{Family}

**Safety Interlock Switch
with guard locking**

SLK series



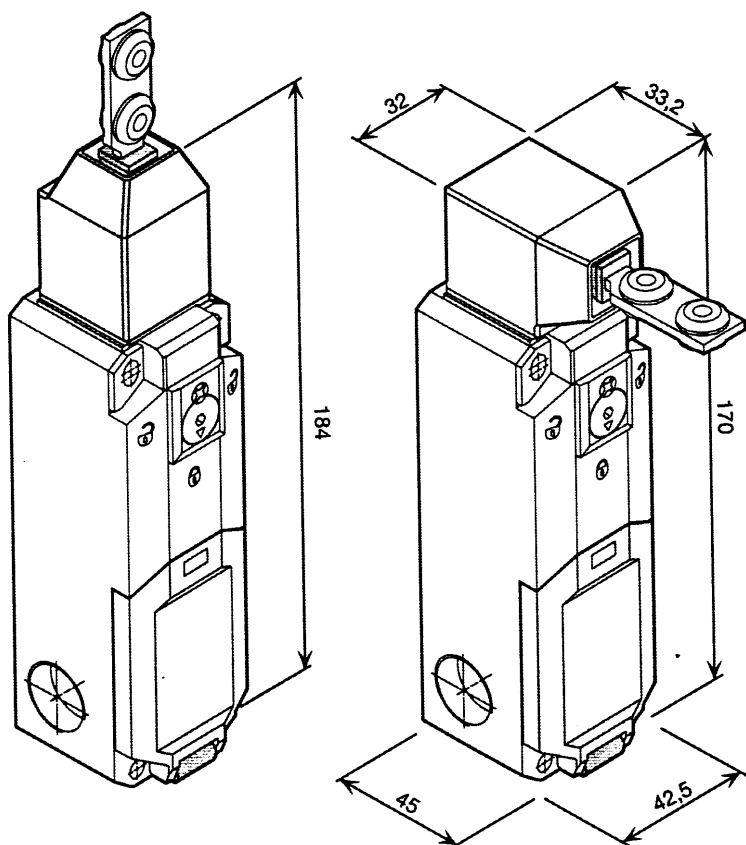
- Safe and universal integration
- Compact design
- Multiple mounting options
- Innovative features



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High safety
for lower cost

Compact in design



Installation

- Mounting of the safety switch with at least 2 x M5 via fixed mounting holes.
- The separate actuator has to be secured against unauthorised or accidental loosening of the mountings (for example one-way screws, shear-head screws, riveting...).
- Before installation the head must be adjusted to horizontal or vertical.
- This is achieved by changing the upper part of the actuator head. This is then secured in place with the screw provided.
- The four actuator approach directions are reached by rotating the actuator head, after pulling the top mounting plate outwards, to release the rotation lock.

Warning:

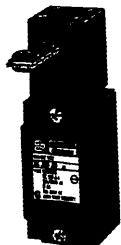
- The safety switch should not be used as an end stop.
- Only the models SLK-FVTU... (spring force lock) remain safe during power cuts.
- Manual release is achieved only after releasing the locking screw and rotating the socket head 90°.
- To keep up the safety level, actuators should only be purchased and used together with the relevant safety switch.

Key to the part description of for the BERNSTEIN Safety switch SLK

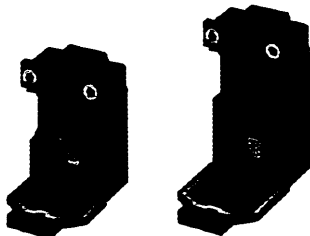
Switch	Lock type	Actuator head	Operating voltage	Contact configuration (Two digit code) 1 st digit = safety guard/actuator 2 nd digit = lock status	Unlatching functions	Additional functions
SLK	F spring lock M Solenoid lock	VTU	24UC- 24-230MC	1 = 1NC⊖ 2 = 2NC⊖ 3 = 1NO 4 = 2NO 5 = 1NC⊖1NO 6 = bare	AR Manual release	LED Radius actuator S connector Adapter X special design

Example: SLK-FVTU24UC-55-ARR = F-type, 24 V AC/DC, 1NC⊖, 1NO on the actuator, 1NC⊖, 1NO on the lock, manual release, radius actuator.

Safety interlocking switch with separate actuator without guard locking



- Metal enclosure, IP 65
- Enclosures dimensions and mounting measurements according to EN 50041
- Actuating horizontally, 4 x 90°
- coded actuator

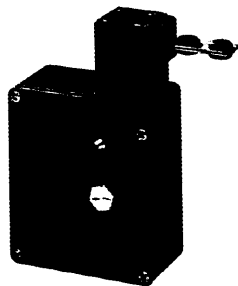


- Plastic enclosure, IP 65
- Standard mounting 40 mm
- Actuating horizontally or vertically
- 4 actuating directions
- coded actuator

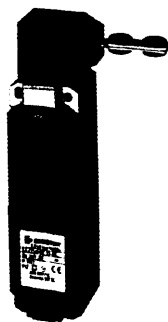


- Plastic enclosure, IP 65
- Mounting dimensions according to EN 50047
- 4 actuating directions, 4 x 90° horizontally and vertically
- coded actuator

Safety interlocking switch with separate actuator with guard locking



- Metal enclosure, IP 67
- Compact design
- Mounting according to EN 50041
- Spring or magnet force interlocking
- 2 independent safety circuits



- Plastic enclosure, IP 67
- Slim design
- Mounting according to EN 50041
- Spring or magnet force interlocking
- 2 independent safety circuits

Innovation
from BERNSTEIN

- Switch technology
- Sensor technology
- Enclosure technology and process communications

Guaranteed safety for man,
machine and process.



BERNSTEIN

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Program for standard types

Model	Description	Lock function	Contact configuration		Control voltage	Additional functions		Actuator Standard or Radius actuator
		Spring lock Solenoid lock	Safety guard (actuator)	Locking (solenoid)		Manual release	LED	
601.8119.001	SLK-FVTU24UC-55-AR	Spring lock	1NC 1NO	1NC 1NO	24 V AC/DC	AR	-	Standard
601.8119.002	SLK-FVTU24-230MC-55-AR	Spring lock	1NC 1NO	1NC 1NO	24-48 V DC + 24-230 V AC	AR	-	Standard
601.8119.003	SLK-MVTU24UC-55	Solenoid lock	1NC 1NO	1NC 1NO	24 V AC/DC	-	-	Standard
601.8119.004	SLK-MVTU24-230MC-55	Solenoid lock	1NC 1NO	1NC 1NO	24-48 V DC + 24-230 V AC	-	-	Standard
601.8169.005	SLK-FVTU24UC-21-AR	Spring lock	2NC	1NC	24 V AC/DC	AR	-	Standard
601.8169.006	SLK-FVTU24-230MC-21-AR	Spring lock	2NC	1NC	24-48 V DC + 24-230 V AC	AR	-	Standard
601.8119.007	SLK-FVTU24UC-51-AR	Spring lock	1NC 1NO	1NC	24 V AC/DC	AR	-	Standard
601.8119.008	SLK-FVTU24-230MC-51-AR	Spring lock	1NC 1NO	1NC	24-48 V DC + 24-230 V AC	AR	-	Standard
601.8119.009	SLK-FVTU24UC-55-ARL	Spring lock	1NC 1NO	1NC 1NO	24 V AC/DC	AR	L	Standard
601.8169.010	SLK-FVTU24UC-21-ARL	Spring lock	2NC	1NC	24 V AC/DC	AR	L	Standard
601.8119.011	SLK-FVTU24UC-51-ARL	Spring lock	1NC 1NO	1NC	24 V AC/DC	AR	L	Standard
601.8119.012	SLK-FVTU24-230MC-55-ARL	Spring lock	1NC 1NO	1NC 1NO	24-48 V DC + 24-230 V AC	AR	L	Standard
601.8169.013	SLK-FVTU24-230MC-21-ARL	Spring lock	2NC	1NC	24-48 V DC + 24-230 V AC	AR	L	Standard
601.8119.014	SLK-FVTU24-230MC-51-ARL	Spring lock	1NC 1NO	1NC	24-48 V DC + 24-230 V AC	AR	L	Standard
601.8119.015	SLK-FVTU24UC-55-ARR	Spring lock	1NC 1NO	1NC 1NO	24 V AC/DC	AR	-	Radius actuator
601.8169.016	SLK-FVTU24UC-21-ARR	Spring lock	2NC	1NC	24 V AC/DC	AR	-	Radius actuator
601.8119.017	SLK-FVTU24UC-51-ARR	Spring lock	1NC 1NO	1NC	24 V AC/DC	AR	-	Radius actuator
601.8119.018	SLK-FVTU24-230MC-55-ARR	Spring lock	1NC 1NO	1NC 1NO	24-48 V DC + 24-230 V AC	AR	-	Radius actuator
601.8169.019	SLK-FVTU24-230MC-21-ARR	Spring lock	2NC	1NC	24-48 V DC + 24-230 V AC	AR	-	Radius actuator
601.8119.020	SLK-FVTU24-230MC-51-ARR	Spring lock	1NC 1NO	1NC	24-48 V DC + 24-230 V AC	AR	-	Radius actuator
601.8119.021	SLK-MVTU24UC-55-L	Solenoid lock	1NC 1NO	1NC 1NO	24 V AC/DC	-	L	Standard
601.8169.022	SLK-MVTU24UC-21-L	Solenoid lock	2NC	1NC	24 V AC/DC	-	L	Standard
601.8119.023	SLK-MVTU24UC-51-L	Solenoid lock	1NC 1NO	1NC	24 V AC/DC	-	-	Radius actuator
601.8119.024	SLK-MVTU24UC-55-R	Solenoid lock	1NC 1NO	1NC 1NO	24 V AC/DC	-	-	Radius actuator
601.8169.025	SLK-MVTU24UC-21-R	Solenoid lock	2NC	1NC	24 V AC/DC	-	-	Radius actuator
601.8119.026	SLK-MVTU24UC-51-R	Solenoid lock	1NC 1NO	1NC	24 V AC/DC	-	-	Radius actuator

Customised designs are possible within the component range (for example changed contact assembly: 2NC + 2NC; 2NC 1NO + 1NC ...)

Electrical features

Switch elements

Rated insulation
voltage U_i : 250 V
Category of Use: AC 15 230 V/4A
Rated Thermal
current I_{th} : 10A
Short circuit
protection: DIAZED-DIN VDE
0636 part 1
6A/neutral gL/gG

Electro magnets

Thermal class: E (120 °C)
Inrush power
consumption: 56 VA (0,2 s)
Permanent power
consumption: 1,1 VA
Operating
frequency: 600 1/h max.

Mechanical features

Enclosure: PA6 GV (UL94-VO)
Lid: PA6 GV (UL94-VO)
Actuator unit: PA6 GV/GD
Separate
actuator: St/PA
Operating
temperature: -25 °C – + 70 °C
Switch function: e.g. 2NC ⊖, 2NO
Switch principle: 4 separate contacts

Mechanical life: 1 Million operations
Actuator radius: R = 400 mm min.
Starting speed: V = 0,5 m/s max.
Mounting: 4 x M5 screws
Connection
cross section: 1,5 mm² flex. max.
Terminals: Cage clamp
Cable entry: 3 x PG 13,5
Weight: Approx 0,3 kg
Protection: IP 67
Assembly: Any position
Interlocking: Spring lock or
magnetic lock

Locking force: 1000 N
Protection
insulation: □

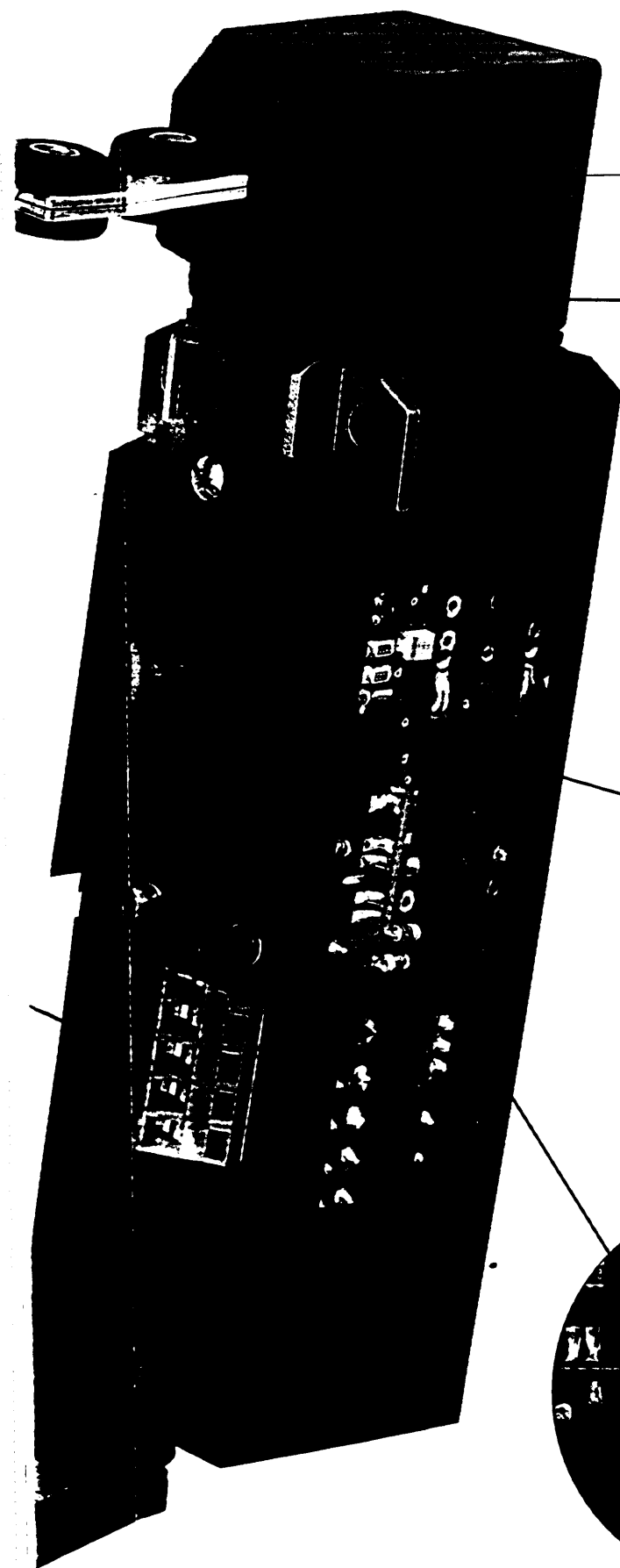
Approval

BG applied for
UL applied for
CSA applied for

Regulations

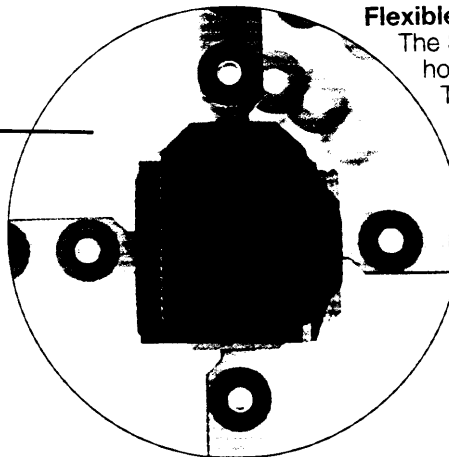
EN 60204-1; IEC 204-1
EN 60947-5-1; IEC 947-5-1
GS-ET 19





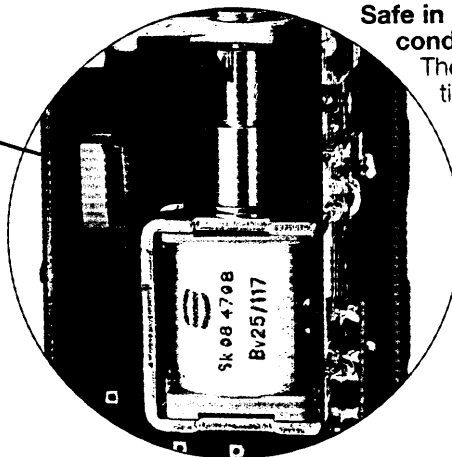
Flexible in mounting

The SLK can be actuated horizontally or vertically. The necessary selection is carried out before installation by easily changing the head orientation. This flexible design is further enhanced as the head can also be rotated through 4 x 90° steps.



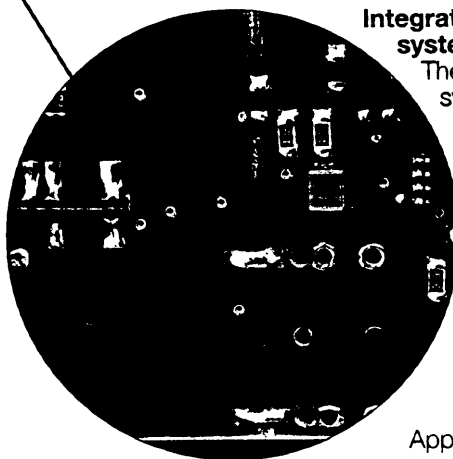
Safe in higher environmental conditions

The very low power consumption makes it possible for use in higher environmental (operating) temperatures. This is made possible by the use of an innovative, patented electro mechanical system, consisting of drive and hold solenoid with the accompanying electronic control.



Integrates universally into the electrical system

The SLK is usable in all safety application systems with its multi-voltage design. It enables connection to all control voltages from 24 to 48V DC as well as 24 to 230V AC. In its standard design the SLK is suitable for control voltages of 24V DC/AC.



ISO 9001



Approvals applied for:



Safety Switch SLK

- With separate actuator and lock
- Insulating material housing, protection to IP67
- Guard door locking with spring or magnetic force

BERNSTEIN presents SLK the innovative new safety switch for easy, cost-effective solutions to safety systems in machine technology. The SLK is used as a locking switch on moving guard doors/gates. On machines or plants with dangerous 'run-down' time SLK prevents unauthorised access by operating personnel. The SLK is available with spring or magnetic force locking.

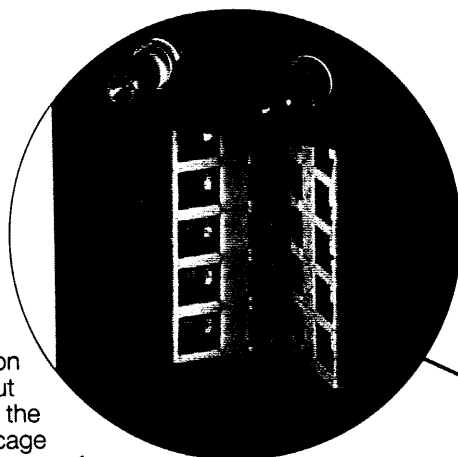
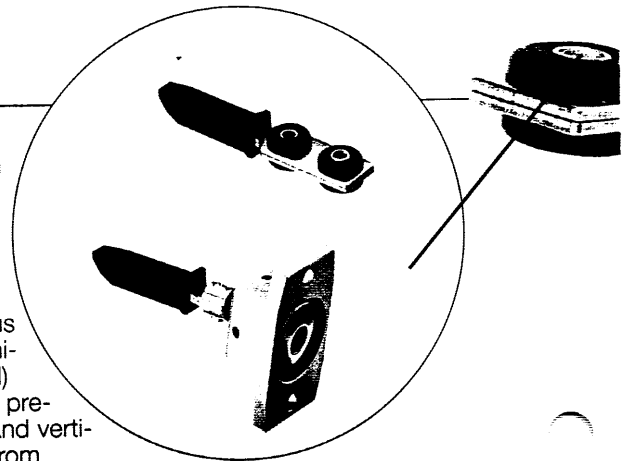
The SLK is compact and slim in design with mounting according to EN 50041. As well as the standard 24V AC/DC version a new multi-voltage design is available for use in the range 24V DC up to 230V AC. The SLK can be actuated either horizontally or vertically, allowing very flexible installation as the actuator head can also be rotated through $4 \times 90^\circ$. Two independent safety circuits monitor the position of the actuator/safety guard and the status of the solenoid/interlocking. Up to two force disconnect contacts are available on both safety circuits.

Product advantages

- **Integrates** safely with two independent safety circuits, flexible contact assembly options with max. 4 NC \ominus
- **Universal** version with multi-voltage supply 24 - 48 V DC and 24 V - 230 V AC (standard: 24 V AC/DC)
- **Flexible** mounting options with rotatable actuator head ($4 \times 90^\circ$) and horizontal or vertical actuator approach
- **Compact** in design (only 170 mm overall length)
- **Innovative** installation by using tension spring cage clamp terminals (cage clamp technology)
- **Function** complies to GS ET 19, EN 60204-1 and EN 60947-5-1

Safe actuation

The actuator made from Stainless steel guarantees safe locking. Its coded design avoids manipulation and taking shortcuts in an "easy way". The optional radius actuator allows the monitoring of smaller (hinged) guard/safety doors. It is pre-adjustable horizontally and vertically and is also made from Stainless steel.



Innovative in installation

The electrical connection of the SLK is carried out safely and reliably, with the use of tension spring, cage clamp terminals. To ensure safe termination the connection area is separate to the functioning switch parts. The use of conventional terminals is optional.

The connection chamber is protected to IP 67.

LED switch status indicators are optional.

