

3204777

Plastic Bodied Safety Switches with Separate Actuator

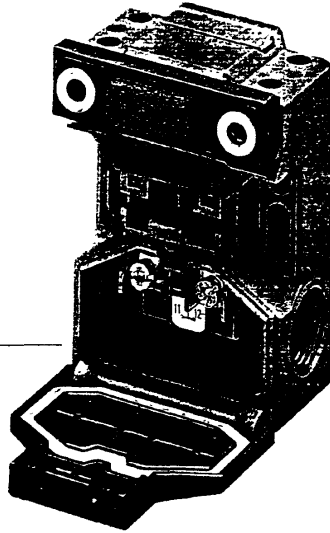
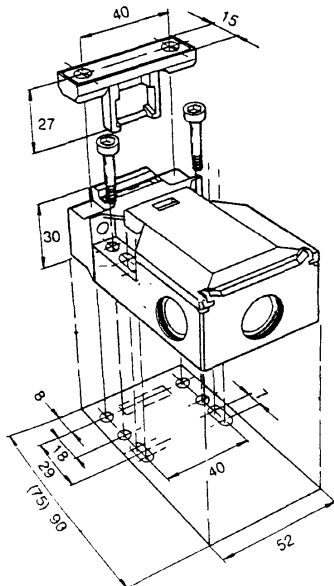
SK
SKC

Protection class IP 65

The SK and SKC safety position switches are ideal in different applications where protection of persons is important. Their constructive safety characteristics conform to DIN EN 60947-5-1, IEC 947-5-1 and the directive GS-ET 15. The main application field of the SK and SKC safety position switches, inside a process or at the machine, is to switch off the machine drive when a movable protective guard is opened.

System advantages

- high manipulation safety by triple coding of the operating device
- increased functional reliability by two independently operating locking systems
- tamper proof protection of the operating device by one-way locking of the protective cover
- ⊕ person-protection function
- fail-safe normally-closed contacts
- high reliability due to 2-pole switch-off (2 N.C.) and 1 additional signalling contact (switching function UV 15)
- galvanic isolation of contacts
- 3 x PG 11 cable inlets
- PA 6 housing and lid (UL 94-V0)

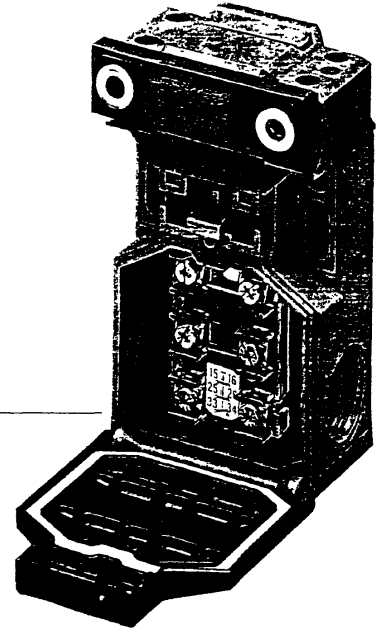


SKC Series
Housing length 75 mm

Switching function

- A1Z 1N.C. ⊕

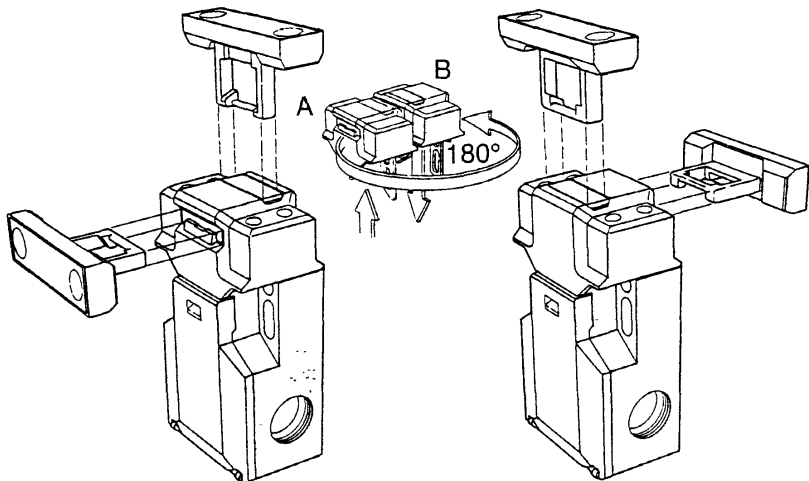
The SKC series is distinguished by its length of only 75 mm and is therefore especially suitable as a safety switch for confined spaces.



SK Series
Housing length 90 mm

Switching functions

- U1Z 1N.C. ⊕ / 1 N.O.
- UV1Z 1N.C. ⊕ / 1 N.O. leading
- A2Z 2N.C. ⊕
- UV15Z 2N.C. ⊕ / 1 N.O. leading
- UV16Z 1N.C. ⊕ / 2 N.O. leading



Fixing

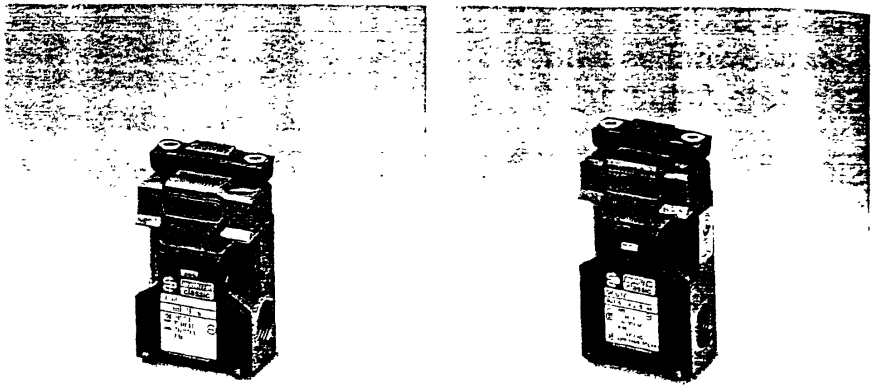
- 2 x M 5 screws, fixing using elongated holes
- 2 x M 5 screws, circular holes for safety applications without additional fixing
- front fixing using 2 x M 5 screws/nuts
- all operating devices with circular holes for M 5 screws spaced 40 mm apart

After opening the clip-on lid, the head can be removed from above (version A); after rotating through 180° (version B), the head can be pushed back onto the housing and can then be secured using the clip-on lid. This results in a total of 4 travel directions.

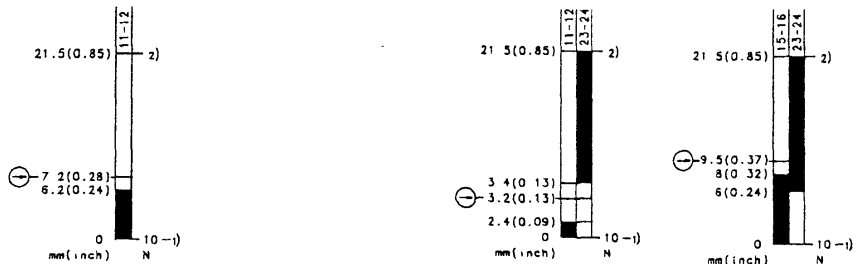
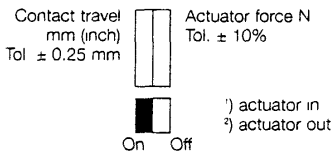
Plastic Bodied Safety Switches with Separate Actuator

SKC
SK

Protection IP 65

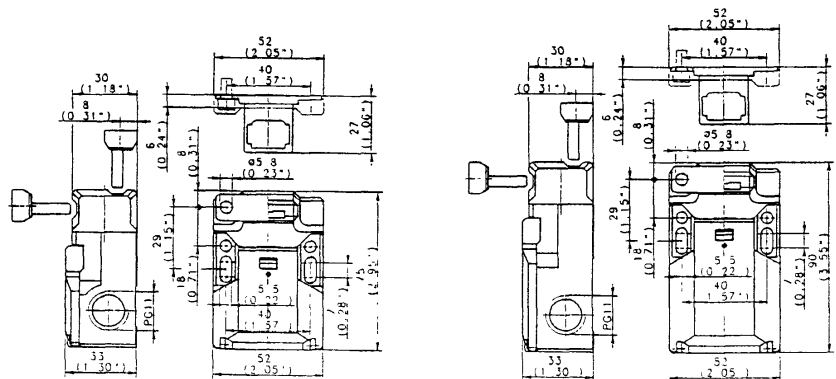


Reference type	SKC-A1Z M	SK-U1Z M	SK-UV1Z M
Part number	601.6169.039	601.6119.016	601.6139.034
Circuit diagram			
⊖ Forced disconnect to IEC 947-5-1 chapter 3			
Za not galvanically separated contacts			
Zb galvanically separated contacts	⊖ Zb	⊖ Zb	⊖ Zb
Slow make & break/snap-action	●/-	●/-	●/-
Internal seal (w)/external seal (w)	Iw	Iw	Iw

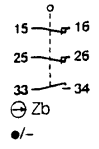


Voltage	max	500 V AC	500 V AC	500 V AC
Permanent current	max.	10 A	10 A	10 A
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13		●	●	●
Switching frequency	max	30/min	30/min	30/min.
Mechanical life - number of switching actions		1 x 10 ⁶	1 x 10 ⁶	1 x 10 ⁶
Operating temperature	min / max	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F	-30 °C/+80 °C -22 °F/+176 °F
Approvals		UL, CSA BG	UL, CSA BG	UL, CSA BG
Weight		0.11 kg/0.24 lb	0.13 kg/0.29 lb	0.13 kg/0.29 lb
Stock status: Ex stock/Built to order		●/-	●/-	●/-

All measurements in mm (inch)

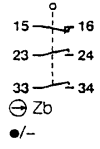


SK-UV15Z M
601.6169.026



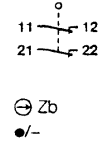
IV

SK-UV16Z M
601.6169.027

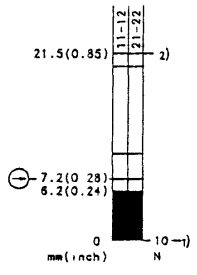
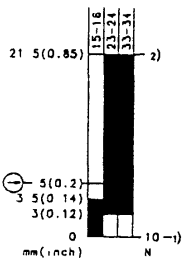
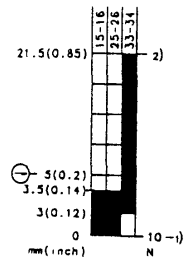


IV

SK-A2Z M
601.6169.036



IV



400 V AC
6 A
●

400 V AC
6 A
●

500 V AC
10 A
●

30/min.
1 x 10⁶
-30 °C/+80 °C
-22 °F/+176 °F

30/min.
1 x 10⁶
-30 °C/+80 °C
-22 °F/+176 °F

30/min.
1 x 10⁶
-30 °C/+80 °C
-22 °F/+176 °F

UL, CSA
BG
0.13 kg/0.29 lb
●/-

UL, CSA
BG
0.13 kg/0.29 lb
●/-

UL, CSA
BG
0.13 kg/0.29 lb
●/-

Selection Table: Actuators

Safety switch
DIN EN 60947-5-1

- \ominus NC contact forced disconnect
- Galvanically separated contacts according to Zb form

Approvals

- UL, CSA
- BG



Actuator M

- Metal
- Stainless steel

Actuator P

- Thermoplastic
- Polyamide

Radius actuator MRH

- Horizontally adjustable
- Metal

Radius actuator MRV

- Vertically adjustable
- Metal

Standard models	Actuator retention force	Contact diagram
Single & two pole		
SK-A1Z	10N	
SKC-A1Z F 20	20N	
SKC-A1Z F 30	30N	
SK-U1Z	10N	
SK-U1Z F 20	20N	
SK-U1Z F 30	30N	
SK-UV1Z	10N	
SK-U1Z F 20	20N	
SK-UV1Z F 30	30N	
SK-A2Z	10N	
SK-A2Z F 20	20N	
SK-A2Z F 30	30N	
SK-SU1Z	10N	
SK-SU1Z F 20	20N	
SK-SU1Z F 30	30N	

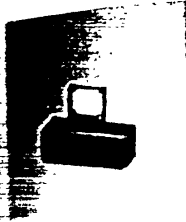
Part number	Part number	Part number	Part number
Type reference	Type reference	Type reference	Type reference
601.6169.039	601.6169.054	601.6169.071	601.6169.072
SKC-A1Z M	SKC-A1Z P	SKC-A1Z MRH	SKC-A1Z MRV
601.6169.069	601.6169.070	○	○
SKC-A1Z F 20 M	SKC-A1Z F 20 P	○	○
○	○	○	○
601.6119.016	601.6119.035	601.6119.041	601.6119.040
SK-U1Z M	SK-U1Z P	SK-U1Z MRH	SK-U1Z MRV
○	○	○	○
611.6119.109	○	601.6119.075	○
SK-U1Z F30 M	○	SK-U1Z F 30 MRH	○
601.6139.034	○	○	601.6139.055
SK-UV1Z M	○	○	SK-UV1Z MRV
○	○	○	○
○	○	○	○
601.6169.036	○	601.6169.043	601.6169.042
SK-A2Z M	○	SK-A2Z MRH	SK-A2Z MRV
○	○	○	○
601.6169.053	○	○	○
SK-A2Z F 30 M	○	○	○
601.6109.062	○	○	○
SK-SU1Z M	○	○	○
○	○	○	○
○	○	○	○

Standard models	Actuator retention force	Contact diagram
Three pole		
SK-UV15Z	10N	
SK-UV15Z F 20	20N	
SK-UV15Z F 30	30N	
SK-UV16Z	10N	
SK-UV16Z F 20	20N	
SK-UV16Z F 30	30N	

Part number	Part number	Part number	Part number
Type reference	Type reference	Type reference	Type reference
601.6169.026	○	601.6169.064	601.6169.065
SK-UV15Z M	○	SK-UV15Z MRH	SK-UV15Z MRV
601.6169.061	○	○	○
SK-UV15Z F 20 M	○	○	○
○	○	○	○
601.6169.027	○	○	○
SK-UV16Z M	○	○	○
○	○	○	○
○	○	○	○

Technically possible (on request)

- Not available



Actuator F

- Spring mounted
- Stainless steel or polyamide



Actuator MRU

- Adjustable horizontally & vertically
- Flexible
- Stainless steel



Actuator F 100

- Latching device
- Stainless steel or polyamide

Part number	Part number	Part number
Type reference	Type reference	Type reference
601.6169.087	601.6169.087	611.6169.202
SKC-A1Z MRU	SKC-A1Z MRU	SKC-A1Z F 100 M
○	○	-
○	○	-
601.6119.084	601.6119.084	611.6119.174
SK-U1Z MRU	SK-U1Z MRU	SK-U1Z F 100 M
○	○	-
○	○	-
○	○	-
○	○	-
601.6169.085	601.6169.085	611.6169.175
SK-A2Z MRU	SK-A2Z MRU	SK-A2Z F 100 M
○	○	-
○	○	-
○	○	-
○	○	-
○	○	-

Technical Data

Standard models Single & two pole

Insulation voltage
 $U_i = 500\text{ V}$

Thermal constant current
 $I_{th} = 10\text{ A}$

Switching frequency
 Max. 30/min

Mechanical life
 1×10^6 strokes

Operating temperature
 $-30\text{ }^\circ\text{C}/+80\text{ }^\circ\text{C}$

Weight
 $0.13\text{ kg}/0.29\text{ lbs}$

Part number	Part number
Type reference	Type reference
601.6169.086	611.6169.161
SK-UV15Z MRU	SK-UV15Z F 100 P
○	-
○	-
○	○
○	-
○	-

Technical Data

Standard models three pole

Insulation voltage
 $U_i = 400\text{ V}$

Thermal constant current
 $I_{th} = 6\text{ A}$

Switching frequency
 Max. 30/min

Mechanical life
 1×10^6 strokes

Operating temperature
 $-30\text{ }^\circ\text{C}/+80\text{ }^\circ\text{C}$

Weight
 $0.13\text{ kg}/0.29\text{ lbs}$

Important note:

To ensure safety integrity, actuators should only be purchased together with the safety switch