

3204777

Plastic Bodied Safety Switches with Separate Actuator

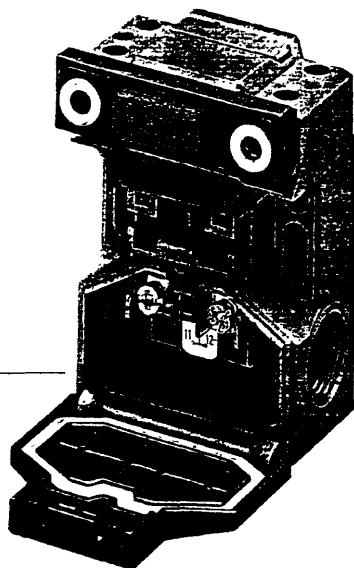
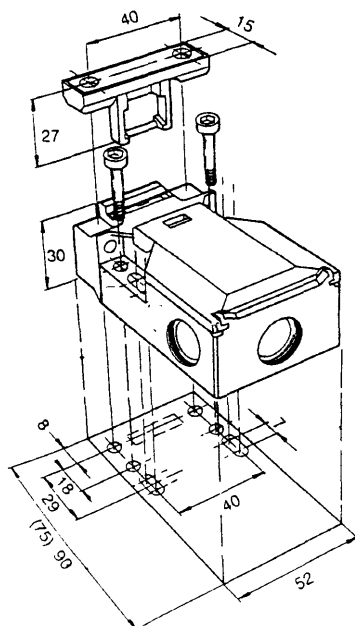
SK
SKC

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)

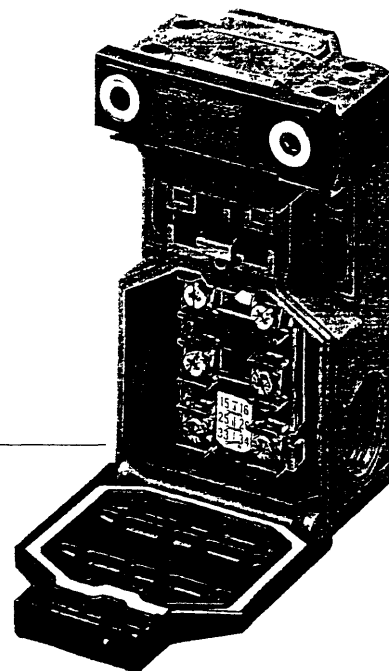


SKC Series
Housing length 75 mm

Switching function

- A1Z 1N.C. ⊕

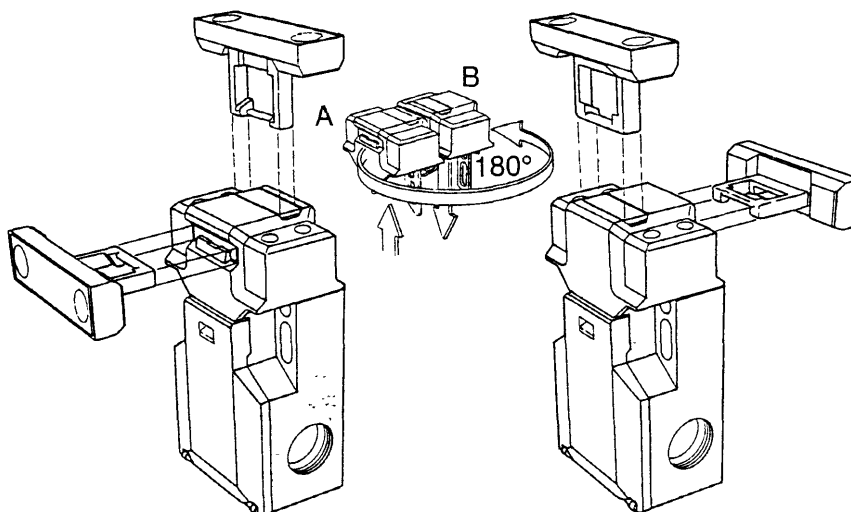
The SKC series is distinguished by its length of only 75 mm and is therefore especially suitable as a safety switch for confined spaces.



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

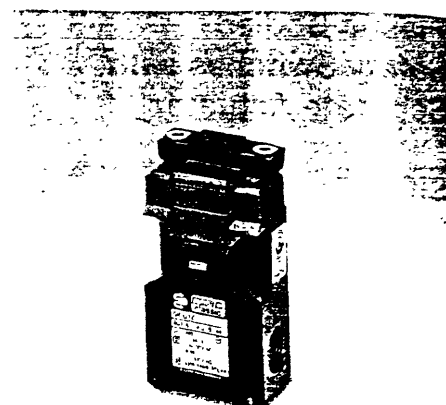
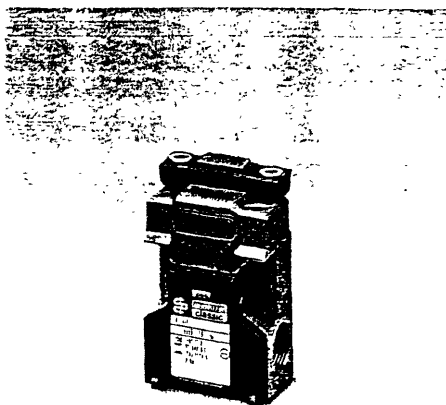
- 2 x M 5 screws, fixing using elongated holes
- 2 x M 5 screws, circular holes for safety applications without additional fixing
- front fixing using 2 x M 5 screws/nuts
- all operating devices with circular holes for M 5 screws spaced 40 mm apart

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

Part number

Circuit diagram

⊖ Forced disconnect to

IEC 947-5-1 chapter 3

Za not galvanically separated contacts

Zb galvanically separated contacts

Slow make & break/snap-action

Internal seal (iw)/external seal (w)

SKC-A1Z M

601.6169.039



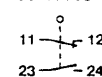
⊖ Zb

●/-

iw

SK-U1Z M

601.6119.016



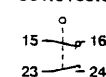
⊖ Zb

●/-

iw

SK-UV1Z M

601.6139.034



⊖ Zb

●/-

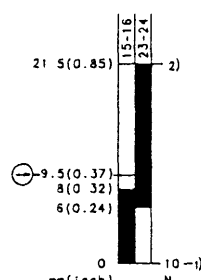
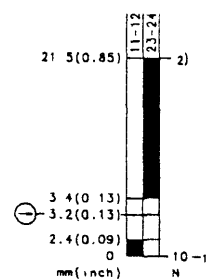
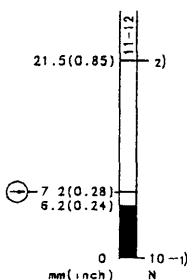
iw

Contact travel
mm (inch)
Tol. ± 0.25 mm

Actuator force N
Tol. ± 10%

On Off

¹⁾ actuator in
²⁾ actuator out



Voltage	max
Permanent current	max.
In-rush current complies with standards IEC 947-5-1 AC 15/DC 13	
Switching frequency	max
Mechanical life - number of switching actions	
Operating temperature	min /max

500 V AC
10 A
●
30/min
1 x 10 ⁶
-30 °C/+80 °C
-22 °F/+176 °F

500 V AC
10 A
●
30/min
1 x 10 ⁶
-30 °C/+80 °C
-22 °F/+176 °F

500 V AC
10 A
●
30/min.
1 x 10 ⁶
-30 °C/+80 °C
-22 °F/+176 °F

Approvals

Weight

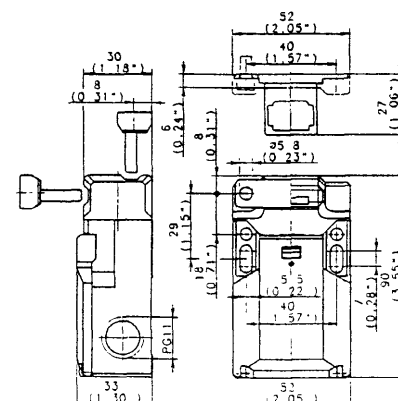
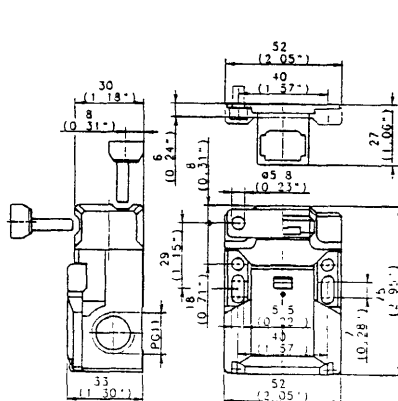
Stock status: Ex stock/Built to order

UL, CSA
BG
0.11 kg/0.24 lb
●/-

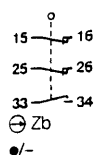
UL, CSA
BG
0.13 kg/0.29 lb
●/-

UL, CSA
BG
0.13 kg/0.29 lb
●/-

All measurements in mm (inch)



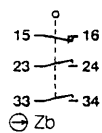
SK-UV15Z M
601.6169.026



●/-

IW

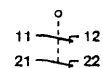
SK-UV16Z M
601.6169.027



●/-

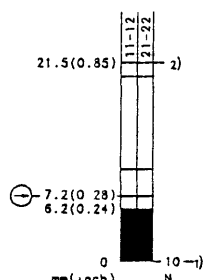
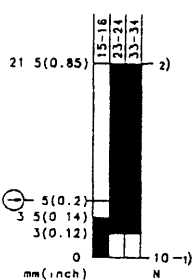
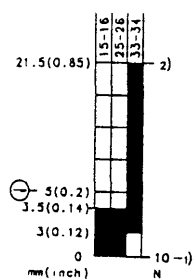
IW

SK-A2Z M
601.6169.036



●/-

IW



400 V AC
6 A

●

400 V AC
6 A

●

500 V AC
10 A

●

30/min.
 1×10^6
-30 °C/+80 °C
-22 °F/+176 °F

30/min.
 1×10^6
-30 °C/+80 °C
-22 °F/+176 °F

30/min.
 1×10^6
-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

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

Approvals

- UL, CSA
- BG



Actuator M

- Metal
- Stainless steel



Actuator P

- Thermoplastic
- Polyamide



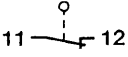
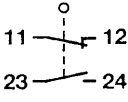
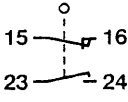
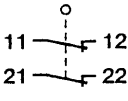
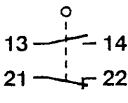
Radius actuator
MRH

- Horizontally adjustable
- Metal

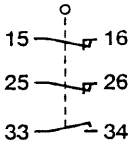
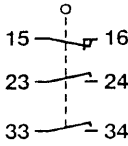


Radius actuator
MRV

- Vertically adjustable
- Metal

Standard models	Actuator	Contact diagram
Single & two pole	retention force	
SKC-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	Contact diagram
Three pole	retention force	
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	○	○	○
○	○	○	○
○	○	○	○

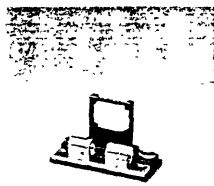
Technically possible (on request)
- Not available

**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
Type reference

Part number
Type reference

Part number
Type reference

601.6169.087
SKC-A1Z MRU
○

611.6169.202
SKC-A1Z F 100 M
-

○

-

601.6119.084
SK-U1Z MRU
○

611.6119.174
SK-U1Z F 100 M
-

○

-

○

○

○

-

○

-

601.6169.085
SK-A2Z MRU
○

611.6169.175
SK-A2Z F 100 M
-

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-

Part number
Type reference

Part number
Type reference

601.6169.086
SK-UV15Z MRU
○

611.6169.161
SK-UV15Z F 100 P
-

○

-

○

-

○

○

○

-

○

-

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

Weight
0.13 kg/0.29 lbs

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

Weight
0.13 kg/0.29 lbs

Important note:

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