## 55 <br> Raised design

Keylock switch 2 positions square $18 \times 18 \mathrm{~mm}$


Product can differ from the current configuration.

## Additional Information

- For the flush design please order the additional front bezel set, see chapter «Accessories»
- Standard lock B2 300
- Further lock numbers see «Technical data»
- With IP 65 no anti-rotation device can be placed within the mounting cut-out. For rear-side mounting of the anti-rotation device, please see chapter «Accessories", Part No. 260-0020-00 or 260-0021-00


Dimensions [mm]
$\mathrm{L} 1=$ Solder terminal $2.8 \times 0.5 \mathrm{~mm}$,
PCB $=$ Print terminal

Equipment consisting of (schematic overview)


Fixing nut

Switching element

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Front cap page 36

## Actuator

Mounting cut-outs [mm]
$\mathrm{D}^{\mathrm{A}}$
Switching positions ( $\mathrm{A}=$ Rest, $\mathrm{B}=$ Momentary, $\mathrm{C}=$ Maintained )

|  | Switching system |  | Contacts |  |  |  | Terminal | Part No. |  |  | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Keylo | switch | uator 2 pos | ons s | are, Fron | nt dim | sion $18 \times 18 \mathrm{~mm}$ |  |  |  |  |
| IP 40 | Snap-action switching element | 42 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | A + C | PCB | 761F.401-OP | 1 | 1 | 0.022 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | PCB | 771F.401-OP | 1 | 1 | 0.022 kg |
|  |  |  |  | A - B | $B=60^{\circ}$ | A | PCB | 781F.401-OP | 1 | 2 | 0.022 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | PCB | 762F.401-OP | 1 | 3 | 0.023 kg |
|  |  | 45 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 761F.401-00 |  | 1 | 0.022 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 771F.401-00 |  | 1 | 0.022 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 781F.401-00 |  | 2 | 0.022 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 762F.401-00 |  | 3 | 0.023 kg |
|  |  |  |  | A - C | C $=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 772F.401-00 |  | 3 | 0.023 kg |
|  |  |  |  | A-B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 782F.401-00 |  | 4 | 0.023 kg |
| IP 65 | Snap-action switching element | 42 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | C $=90^{\circ}$ | $A+C$ | PCB | 761F.401-WP | 1 | 1 | 0.022 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | PCB | 771F.401-WP | 1 | 1 | 0.022 kg |
|  |  |  |  | A - B | $B=60^{\circ}$ | A | PCB | 781F.401-WP | 1 | 2 | 0.022 kg |
|  |  | 45 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 761F.401-W0 |  | 1 | 0.022 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 771F.401-W0 |  | 1 | 0.022 kg |

## Raised design

|  | Switching system |  | Contacts |  |  |  | Terminal | Part No. |  |  | Weight |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| IP 65 | Snap-action switching element | 45 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - B | $B=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 781-.401-W0 |  | 2 | 0.022 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A-C | C $=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 762-.401-W0 |  | 3 | 0.023 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 772-.401-W0 |  | 3 | 0.023 kg |
|  |  |  |  | A - B | $B=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 782-.401-W0 |  | 4 | 0.023 kg |

Keylock switch actuator 2 positions square, Front dimension $18 \times 18 \mathrm{~mm}$

| IP 40 | Snap-action switching element | 52 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | A + C | PCB | 911F.401-OP | 1 | 5 | 0.024 kg |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | A-C | C $=90^{\circ}$ | A | PCB | 921F.401-OP | 1 | 5 | 0.024 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | PCB | 931F.401-OP | 1 | 6 | 0.024 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A-C | $\mathrm{C}=90^{\circ}$ | $A+C$ | PCB | 912F.401-OP | 1 | 3 | 0.025 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | PCB | 932F.401-OP | 1 | 4 | 0.025 kg |
|  |  |  | $3 \mathrm{NC}+3 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | A | PCB | 923F.401-OP | 1 | 7 | 0.026 kg |
|  |  | 55 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A-C | C $=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 911F.401-00 |  | 5 | 0.024 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 921F.401-00 |  | 5 | 0.024 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 931F.401-00 |  | 6 | 0.024 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | A + C | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 912F.401-00 |  | 3 | 0.025 kg |
|  |  |  |  | A-C | C $=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 922F.401-00 |  | 3 | 0.025 kg |
|  |  |  |  | A-B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 932F.401-00 |  | 4 | 0.025 kg |
|  |  |  | $3 \mathrm{NC}+3 \mathrm{NO}$ | A-C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 913F.401-00 |  | 7 | 0.027 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 923F.401-00 |  | 7 | 0.027 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 933F.401-00 |  | 8 | 0.027 kg |
| IP 65 | Snap-action switching element | 52 mm | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | C $=90^{\circ}$ | A | PCB | 921F.401-WP | 1 | 5 | 0.024 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | PCB | 931F.401-WP | 1 | 6 | 0.024 kg |
|  |  |  | $3 \mathrm{NC}+3 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | A | PCB | 923F.401-WP | 1 | 7 | 0.026 kg |
|  |  |  |  | A-B | $\mathrm{B}=60^{\circ}$ | A | PCB | 933F.401-WP | 1 | 8 | 0.026 kg |
|  |  | $55 \mathrm{~mm}$ | $1 \mathrm{NC}+1 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 911F.401-W0 |  | 5 | 0.024 kg |
|  |  |  | $2 \mathrm{NC}+2 \mathrm{NO}$ | A - C | $\mathrm{C}=90^{\circ}$ | $A+C$ | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 912F.401-W0 |  | 3 | 0.025 kg |
|  |  |  |  | A - C | $\mathrm{C}=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 922F.401-W0 |  | 3 | 0.025 kg |
|  |  |  |  | A-B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 932F.401-W0 |  | 4 | 0.025 kg |
|  |  |  | $3 \mathrm{NC}+3 \mathrm{NO}$ | A - C | C $=90^{\circ}$ | A + C | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 913F.401-W0 |  | 7 | 0.027 kg |
|  |  |  |  | A - C | C $=90^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 923F.401-W0 |  | 7 | 0.027 kg |
|  |  |  |  | A - B | $\mathrm{B}=60^{\circ}$ | A | Solder $2.8 \times 0.5 \mathrm{~mm}$ | 933F.401-W0 |  | 8 | 0.027 kg |

Contacts: NC = Normally closed, NO = Normally open
Switching action: $\mathrm{A}=$ Rest, $\mathrm{B}=$ Momentary, $\mathrm{C}=$ Maintained
The component layouts you will find from page 107

## 55

| Q- - - - - | $21 \quad 13$ | Q- - - - - | $21 \quad 13$ | Q- - - - - | 2113 | 21 | 13 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $4_{+--1}^{\text {cIII }}$ | $\psi_{-}^{\mathrm{cI}}$ |  |
|  | 2214 |  | 2214 |  | $22 \quad 14$ | 22 | 14 |
| Wiring diagram 1 |  | Wiring diagram 2 |  | Wiring diagram 3 |  |  |  |


| $Q$ - - - - - | 2113 | $21 \quad 13$ |  |  | $Q-\sim-\quad-\quad-$ | 2113 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\left\lvert\, \begin{aligned} & \text { c II } \\ & -1\end{aligned}\right.$ |
|  | 2214 | 2214 |  |  | 2214 |
| Wiring diagram 4 |  |  | Wiring diagram 5 |  |  | Wiring diagram 6 |  |


Schaltschema 7


Schaltschema 8

## 55

Accessories

Front bezel for keylock switch and selector switch 2 positions

## Additional Information

- Front bezel and switch will be deliverd assembled


Front bezel for keylock switch and selector switch 2 positions square, $18 \times 18 \mathrm{~mm}$

| fits for all Part No. | without marking | Plastic | grey | 200-3004-00 | 0.002 kg |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | black | 200-4004-00 | 0.002 kg |
| for Part No. 761-xxx ... 772-xxx \| 911-xxx ... 925-xxx | 811-xxx ... 825-xxx | 0-1 (90 ${ }^{\circ}$ | Plastic | grey | 200-3001-00 | 0.002 kg |
|  |  |  | black | 200-4001-00 | 0.002 kg |
| for Part No. 781-xxx \| 782-xxx | 931-xxx ... 935-xxx | 831-xxx ... 835-xxx | 0-I (60 ${ }^{\circ}$ | Plastic | black | 200-4001-01 | 0.002 kg |



Front bezel for keylock switch and selector switch 2 positions rectangular, $18 \times 24 \mathrm{~mm}$

| fits for all Part No. | without marking | Plastic | grey | 200-5004-00 | 0.002 kg |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| for Part No. $761-x x x \ldots 772-x x x\|911-x x x \ldots 925-x x x\| 811-x x x \ldots 825-x x x$ | $0-I\left(90^{\circ}\right)$ | Plastic | grey | black | $\mathbf{2 0 0 - 6 0 0 4 - 0 0}$ | 0.002 kg |
|  |  |  | black | 200-5001-00 | 0.002 kg |  |
| for Part No. $781-x x x\|782-x x x\| 931-x x x \ldots 935-x x x \mid 831-x x x \ldots 835-x x x$ | $0-I\left(60^{\circ}\right)$ | Plastic | black | $\mathbf{2 0 0 - 6 0 0 1 - 0 1}$ | 0.002 kg |  |

Front bezel for keylock switch and selector switch 2 positions round, 18 mm

| fits for all Part No. | without marking | Plastic | grey | 200-1004-00 | 0.002 kg |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | black | 200-2004-00 | 0.002 kg |
| for Part No. 761-xxx ... 772-xxx \| 911-xxx ... 925-xxx | 811-xxx ... 825-xxx | 0-1 (90 ${ }^{\circ}$ | Plastic | grey | 200-1001-00 | 0.002 kg |
|  |  |  | black | 200-2001-00 | 0.002 kg |
| for Part No. 781-xxx \| 782-xxx | 931-xxx ... 935-xxx | 831-xxx ... 835-xxx | 0-I (60 ${ }^{\circ}$ | Plastic | black | 200-2001-01 | 0.002 kg |



Front bezel for keylock switch and selector switch 2 positions square, $24 \times 24 \mathrm{~mm}$

| fits for all Part No. | without marking | Plastic | grey | 200-9004-00 | 0.002 kg |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | black | 200-0004-00 | 0.002 kg |
| for Part No. 761-xxx ... 772-xxx \| 911-xxx ... 925-xxx | 811-xxx ... 825-xxx | 0-I (90 ${ }^{\circ}$ | Plastic | grey | 200-9001-00 | 0.002 kg |
|  |  |  | black | 200-0001-00 | 0.002 kg |
| for Part No. 781-xxx \| 782-xxx | 931-xxx ... 935-xxx | 831-xxx ... 835-xxx | 0-1 (60 ${ }^{\circ}$ | Plastic | black | 200-0001-01 | 0.002 kg |

Front bezel for keylock switch and selector switch 2 positions round, 24 mm

| fits for all Part No. | without marking | Plastic | grey | 200-7004-00 | 0.002 kg |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | black | 200-8004-00 | 0.002 kg |
| for Part No. 761-xxx ... 772-xxx \| 911-xxx ... 925-xxx | 811-xxx ... 825-xxx | $0-I\left(90^{\circ}\right)$ | Plastic | grey | 200-7001-00 | 0.002 kg |
|  |  |  | black | 200-8001-00 | 0.002 kg |
| for Part No. 781-xxx \| 782-xxx | 931-xxx ... 935- xxx | 831-xxx ... 835-xxx | 0-1 (60 ${ }^{\circ}$ | Plastic | black | 200-8001-01 | 0.002 kg |

## 55 <br> Technical data

## Device

## General

Swisstac switches are modularly designed. They are divided in three groups:

## 1. Front

Interface Human-Switch with state detector.
2. Intermediate section

Set and reset device, lamp holder, latching funktion.
3. Switching element block

Up to 3 switching elements can be integrated in a switching element block.

Each switch is tested fully mounted. Electrical output and service life are determinated by the switching element. Front and intermediate section are designed for maximum service life of the switching element. They determine in what way the switches are protected against external influences. The type approvals relate to the complete switch.

## Environmental conditions

## Shock resistance

(single impacts, semi-sinusoidal)
$500 \mathrm{~m} / \mathrm{s}^{2}$, puls width 11 ms , as per EN IEC 60068-2-27
max. $150 \mathrm{~m} / \mathrm{s}^{2}$, pulse width 11 ms , as per EN IEC 60068-2-29

## Vibration resistance

(sinusoidal)
max. $100 \mathrm{~m} / \mathrm{s}^{2}$ at $10 \mathrm{~Hz} \ldots 500 \mathrm{~Hz}$, as per EN IEC 60068-2-6

## Approvals

## Approbations

CSA
ENEC (EN 61058)
UL
VDE

## Declaration of conformity

CE

## Front

## General

The front notifies the switching status, serves for activation of the switch and determines its type of protection. With the exeption of the front 18 mm dia. of the illuminated pushbuttons 55 , all front bezel elements have activation protection.

## Material

## Lens

Polycarbonate (PC)
Front bezel
Polybutylene terephthalate (PBT)

## Actuator 35 mm

Polybutylene terephthalate (PBT)

## Lock housing

Polybutylene terephthalate (PBT)

## Lock cylinder

Polybutylenterephthalat reinforced with carbon fibre (PBT) sealing bulb IP 65 (Silicone)

## Environmental conditions

## Protection degree

IP 65 or IP 40, as per EN IEC 60529

## Intermediate section

## General

The intermediate section integrates characteristics as setting, reset function and click-stop device. Besides all for a switch necessary parts, like front parts, switching block and lamps, are fastened at the intermediate section.

## Mechanical characteristics

## Mechanical lifetime

Illuminated pushbutton $\quad>2$ million cycles of operation
Keylock- and Selector switch $>50000$ cycles of operation
Emergency-stop switch
Illuminated push-pull switch
$>8000$ cycles of operation
$>250000$ cycles of operation

## Material

## Housing

Polycarbonate (PC)

## Lamp terminal

Nickel silver

## Electrical characteristics

## Electric strength

3750 VAC, 50 Hz , 1 min., as per EN IEC 61058-1

## Isolation resistance

$>1012 \Omega$ as per DIN IEC 60512-2-10

## Environmental conditions

## Storage temperature

$-40^{\circ} \mathrm{C} \ldots+85^{\circ} \mathrm{C}$, as per EN IEC 60068

## Operating temperature

$-25^{\circ} \mathrm{C} \ldots+55^{\circ} \mathrm{C}$, as per EN IEC $60068-2$

## Switching element block

## General

Up to five independent switching elements can be integrated in the switching element block as a switching unit. There are four different types of elements available.

1. Snap-action switching element
2. Slow-make Stop switching element
3. Diode element
4. Blind element

## Material

Holder for 2 switching elements
Polyamide (PA 6)
Holder for 3 switching elements
Stainless steel

## Lamp terminal

CuBe, $2 \mu \mathrm{~m}$ Optalloy

## Mechanical characteristics

## Terminals

Soldering terminal (also pluggable $2.8 \times 0.5 \mathrm{~mm}$ ) or PCB terminal, Brass gold plated
Wire cross-section $1.0 \mathrm{~mm}^{2}$ max.

## Electrical characteristics

## Electric strength

2500 VAC, 50 Hz , 1 min. (functional isolation)

Isolation resistance
$>1012 \Omega$

## Snap-action switching element

## Switching system

Is equipped with double-break jump contacts. Owing to the large cleaning path, outstanding self-cleaning is possible. The multilayer contacts are designed for universal use. They are gilded with a $2 \mu \mathrm{~m}$ gold coating. Each snap-action switching element comprises a NC (normally closed contact) and a NO (normally open contact).

## Material

## Housing

Frianyl (PA6)

## Contacts

AgNi, $2 \mu \mathrm{~m}$ gold plated

## Contact carrier

Brass or CuBe

Mechanical characteristics

## Terminals

Soldering terminal (also pluggable $2.8 \times 0.5 \mathrm{~mm}$ ) or PCB terminal,
Brass gold plated
Wire cross-section $1.0 \mathrm{~mm}^{2}$ max.

## Actuating force

For each snap-action switching element approx. 2N

## Rebound time

typically $0.5 \mu \mathrm{~s}$

## Contact opening width

$2 \times 0.65 \mathrm{~mm}$

## Contact cleaning path

$2 \times 0.6 \mathrm{~mm}$

## Mechanical lifetime

2 million cycles of operation

## Electrical characteristics

## Contact resistance

New state with gold plated contact $\leq 50 \mathrm{~m} \Omega$, statically

## Electrical life

> 10000 cycles of operation
EN IEC 60947-5-1, AC-12
Voltage 24 V 48 V 75 V 110V 250 V
Current 6A 6A 5A 2A 0.5A
EN IEC 61058-1 (inductive)
Voltage 250V
Current 1.5A

## 55 <br> Technical data

## Conventional free air thermal current Ith

6 A from 1 to 3 -poles switching element block

## Switch rating

as per EN IEC 61058-1
250V, 5A (non-inductive) up to 3 switching elements
$250 \mathrm{~V}, 1.5 \mathrm{~A}$ (inductive) up to 3 switching elements
$5 \mathrm{VAC} / \mathrm{DC}, 1 \mathrm{~mA}$ min.

## Environmental conditions

## Storage temperature

$-40^{\circ} \mathrm{C} \ldots+85^{\circ} \mathrm{C}$, as per EN IEC 60068

## Operating temperature

$-25^{\circ} \mathrm{C} \ldots+55^{\circ} \mathrm{C}$, as per EN IEC 60068-2

## Slow-make switching element Stop switch

## Switching system

Is equipped with rigid contact link. The slow-make element opens positively and simply consists of a double-break NC. The multilayer contacts are designed for universal use and are gilded with a $2 \mu \mathrm{~m}$ gold coating. The Stop slow-make element is designed according to EN IEC 60947-5-1.

## Material

## Housing

Frianyl (PA6)

## Contacts

AgNi, $2 \mu \mathrm{~m}$ gold plated

## Contact carrier

Brass or CuBe

Mechanical characteristics

## Terminals

Soldering terminal (also pluggable $2.8 \times 0.5 \mathrm{~mm}$ ) or PCB terminal, Brass gold plated
Wire cross-section $1.0 \mathrm{~mm}^{2}$ max.

## Contact opening width

$>2 \times 1.5 \mathrm{~mm}$

## Mechanical lifetime

8000 cycles of operation

## Electrical characteristics

## Rated Operational Voltage $\mathbf{U}_{\mathbf{e}}$

250VAC, as per EN IEC 60947-1

## Rated Insulation Voltage $\mathbf{U}_{\mathbf{i}}$

250 V , as per EN IEC 60947-1

## Electrical life

8000 cycles of operation at $250 \mathrm{VAC}, 1 \mathrm{~A}$
Conventional free air thermal current $\mathrm{I}_{\text {th }}$
5A, as per EN IEC 60947-5-1

## Switch rating

Switch rating AC with silver contact (gold plated), 250 VAC, 1 A, service category AC-15, as per EN IEC 60947-5-1

Short-circuit protection
Series-connected blow-out fuse 5A gL

## Environmental conditions

## Storage temperature

$-40^{\circ} \mathrm{C} \ldots+85^{\circ} \mathrm{C}$, as per EN IEC 60068

## Operating temperature

$-25^{\circ} \mathrm{C} \ldots+55^{\circ} \mathrm{C}$, as per EN IEC 60068-2

## Diode element

## General

No switching function. Diodes are soldered into the switching element housing between the contact connections.

## Mechanical characteristics

## Terminals

Soldering terminal (also pluggable $2.8 \times 0.5 \mathrm{~mm}$ ),
Brass gold plated
Wire cross-section $1.0 \mathrm{~mm}^{2}$ max.

Electrical characteristics
Diode
1 N 4007 , rated current $=1.0 \mathrm{~A}, \mathrm{VRRM}=1000 \mathrm{~V}$

## Blind element

General
Insert in empty places in the switching element block. Noncon-
ducting and without electrical function.

## Buzzer

## General

Device with reverse-connect protection.

## Mechanical characteristics

## Terminals

Soldering terminal (also pluggable $2.8 \times 0.5 \mathrm{~mm}$ ) or PCB terminal,
Brass gold plated
Wire cross-section $1.0 \mathrm{~mm}^{2}$ max.

## Material

## Housing

Polybutylene terephthalate (PBT)

## Electrical characteristics

## Operating voltage

6,12 and $24 \mathrm{~V} \mathrm{AC/DC} \pm 10 \%$

## Power consumption

approx. 13 mA

## Acoustics

approx. 84 dB at 0.1 m

## Frequency (tone)

approx. 2.3 kHz

## Tightening torque

for fixing nut max. 50 Ncm

## Unlock torque

15Ncm

## Actuating travel

10 mm
Rebound time
$\leq 2 \mathrm{~ms}$
Mechanical lifetime
50000 cycles of operations

Electrical characteristics
Rated Operational Voltage $\mathbf{U}_{\mathbf{e}}$ 250VAC, as per EN IEC 60947-1

## Rated Insulation Voltage $\mathbf{U}_{\mathbf{i}}$

300VAC, as per EN IEC 60947-5-1

## Contact resistance

New state $\leq 50 \mathrm{~m} \Omega$, as per DIN IEC 60512-2-5

## Electrical life

6050 cycles of operation
Conventional free air thermal current $\mathrm{t}_{\mathrm{th}}$

5A, as per EN IEC 60947-5-1

## 55

the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

## Switch rating

Switch rating AC (inductive) with silver contact, service category AC-13, as per EN IEC 60947-5-1
Voltage 24 VAC 60VAC 120VAC 250VAC
Current 6A 6A 5A 3A
Switch rating AC (inductive) with silver contact, service category AC-14, as per EN IEC 60947-5-1
Current 24VAC 60VAC 120VAC 250VAC
Voltage $5 \mathrm{~A} \quad 4 \mathrm{~A} \quad 3 \mathrm{~A} \quad 2 \mathrm{~A}$
Switch rating (non-inductive) with silver contact
Voltage 24 VDC 60VDC 110VDC 240VDC
Current 6A 2A 0.7A 0.5 A
Switch rating DC with silver contact, service category DC-13, as per EN IEC 60947-5-1
$\begin{array}{lllll}\text { Voltage } & 24 \mathrm{VDC} & 60 \mathrm{VDC} & 110 \mathrm{VDC} & 240 \mathrm{VDC} \\ \text { Current } & 2 \mathrm{~A} & 1 \mathrm{~A} & 0.4 \mathrm{~A} & 0.2 \mathrm{~A}\end{array}$

## Recommended minimum operational data

Silver contact (Soldering terminal) 20VAC/DC, 100 mA

## Electric strength

4000 VAC, $50 \mathrm{~Hz}, 1 \mathrm{~min}$., as per DIN IEC 60512-2 between all terminals and earth

## Short-circuit protection

Series-connected blow-out fuse 10A gL

## Overvoltage category

III, as per EN IEC 60947-5-1

## Degree of pollution

3, as per EN IEC 60947-1

## Environmental conditions

## Storage temperature

$-40^{\circ} \mathrm{C} \ldots+85^{\circ} \mathrm{C}$, as per EN IEC 60068

## Operating temperature

$-25^{\circ} \mathrm{C} \ldots+55^{\circ} \mathrm{C}$, as per EN IEC $60068-2$

## Shock resistance

(single impacts, semi-sinusoidal)
$500 \mathrm{~m} / \mathrm{s}^{2}$ puls width 11 ms , as per EN IEC 60068-2-27

## Vibration resistance

(sinusoidal)
max. $100 \mathrm{~m} / \mathrm{s}^{2}$ at $10 \mathrm{~Hz} \ldots 2000 \mathrm{~Hz}$, amplitude 0.75 mm , as per EN IEC 60068-2-6

## Protection degree

as per EN IEC 60529
Frontside IP 65, backside IP 40

## Approvals

## Approbations

CSA
UL
VDE

## Declaration of conformity

CE

## Technical data <br> 55

## Keylock switch

Standard lock number is B2 300 (Part No. 240-2001-00).
Further locks are available.
By order please use the ordersheet on the website
www.eao.com/downloads

## Stop switch with key to release

Standard lock number is B2 390 (Part No. 240-3001-00).
Further locks are available.
By order please use the ordersheet on the website
www.eao.com/downloads

## Emergency-stop switch, foolproof with key to release

Standard lock number is KABA 1001 (Part No. 240-4001-00), other lock numbers on request.
Spare keys may be ordered under Part No. 240-4001-00 1001.

EAO reserves the right to alter specifications without further notice.

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