$$
593-801 T 0885
$$



## PART NUMBERING SYSTEM FOR <br> SERIES 14 ASSEMBLIES



## STANDARD PART NUMBER FOR ACTUATORS

Example of the comprising parts that make up an assembly
$\mathrm{K} 14-131.0255518=14-131.025+704.602 .5+704.955 .1+704.609 .9$
$K 14-040.0052550=14-040.005+704.602 .2+704.600 .0+704.609 .9$
Example of part number system for flush mount switch
Momentary red pushbutton proud mount $1 \mathrm{C} / \mathrm{O}$, aluminium front ring :
Momentary red pushbutton proud mount $1 \mathrm{C} / \mathrm{O}$, aluminium flushmount bezel: K14-131.0252518

## General Notes

The illuminated pushbuttons with hoseproof front (IP 67) of the series 14 combine the robust actuators of series 04 with snap-action, low-level switching elements of series 01,31 , etc. For technical data see pages 2-4
In addition to the standard contacts (gold-plated silver), silver contacts can also be ordered. The front dimension of these units is 29 mm dia.

## Mounting

Mounting from the front through the mounting hole is assured even when the wiring has already been attached (mounting dimensions and spacing see pages 5-9).
The pushbuttons are screwed to the panel by means of a front ring and prevented from twisting by two screws.
To ensure correct positioning of the pushbuttons we can provide a positioning insert on request.
The universal terminals of the low-level switching elements permit them to be mounted on printed circuit boards (PCB).
These terminals are also suitable for dip soldering. For these terminals we can also supply a plug-in base which, when soldered on to the board, enables the switch to be plugged in.

## Lenses

The flat lenses, made of polyamide, are obtainable in various colours, as well as translucent or transparent.

## Marking

For engravings, hot stamping and film inserts, see under "Marking" on pages 31 and 32.

## Illumination

Perfect illumination of the different coloured lenses is assured by lamps T 5,5 (6-60 V).
If the supply voltage is above 110 V and the lamp voltage is 60 V , an external dropping resistor or capacitor must be used. Multi-LEDs T $5,5(6,12,24,48 \mathrm{~V})$ are available in the colours red, yellow and green.
Due to the high surface temperature, resistors may not be soldered direct to the terminals of the pushbuttons. See under "Lamp accessories" on page 27.

## Position indicating

When a switch with maintained action is actuated, the lens remains in the depressed position mechanically. The state of the switch is apparent at all times from the position of the lens.

How to order


Example:

- lluminated pushbutton; momentary action, gold-plated silver contact; soldering terminals; 1 switching element 14-131.025
- Lens red, transparent 704.602.2
- Front ring; aluminium, natural anodized 704.600.1
- Marking plate; white, translucent 704.609.9

All dimensions in mm.
We reserve the right to modify technical data.

Pushbutton


Resistance to vibration (sinusoidal)
10 g at $10-2000 \mathrm{~Hz}$, amplitude $1,5 \mathrm{~mm}$ as per IEC 68-2-6
Shockproof (single impact, semi-sinusoidal)
15 g for 11 ms as per IEC 68-2-27

## Actuator case

Polyamide

## Switch case

DAP (diallyl phthalate), heat-resistant and self-extinguishing

Degree of protection of front as per IEC 529 IP 67

## Approvals

- SEV 250 VAC/5 A - Germanischer Lloyd
- CSA 300 VAC
- UL
- VDE
- Russian Marine Register

Dimensions refer to page 10

max. 8


Snap-action switching element

Indicator, illuminated pushbuttons


Plug-in terminals $2,8 \mathrm{~mm}$

Indicator 33 mm

Dimensions refer to page 11

${ }^{\max .} 8$

Indicator, illuminated pushbuttons


Diode matrix "M"

Dimensions refer to pages 17-19


Low-level "LL"

Indicator, illuminated pushbuttons


Dimensions refer to page 19


Low-level "LL", EH/EH2

## Dimensions refer to page 20

## Lever-operated switch




Snap-action switching element


Switch operated by a short lever


For standard
pushbuttons
 prevented from twisting


For pushbuttons with positioning insert




Lens, marking plate, marking cap and front ring to be ordered separately

| $\not \subset 29 \mathrm{~mm}$ <br> Description |  |  |  | Type No. |  |  |  | $\stackrel{E}{E}$$\stackrel{E}{\circ}$$\stackrel{\circ}{\circ}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| Indicator <br> (The total length is the same as that of the illuminated pushbutton) | - | - | $\bigotimes_{0}^{1}$ | 14-031. | 0 | 0 | 6 | 44.5 |
| Illuminated pushbutton 1 normally open contact | $\times$ | - | $\underbrace{4}_{i-4}$ | 14-435. | 0 | 3 | 6 | 44,5 |
| Illuminated pushbutton 2 normally open contacts | $\times$ | - | $\underbrace{1-1}_{1-4} \underbrace{1-3}_{2}$ | 14-431. | 0 | 3 | 6 | 44,5 |
| Illuminated pushbutton 1 normally closed contact | $\times$ | - | $\underbrace{2}_{i}$ | 14-436. | 0 | 3 | 6 | 44,5 |
| Illuminated pushbutton 2 normally closed contacts | $\times$ | - |  | 14-432. | 0 | 3 | 6 | 44,5 |
| Illuminated pushbutton 1 normally closed contact 1 normally open contact | $\times$ | - |  | 14-433. | 0 | 3 | 6 | 44,5 |

Dimensions see page 6

| 毋29 mm |  |  | － | Type No． |  |  |  | $\begin{gathered} \stackrel{0}{2} \\ \frac{0}{2} \\ \stackrel{y}{0} \\ -1 \end{gathered}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | $\left\|\begin{array}{l} \hat{訁} \\ 0 \\ 0 \\ 0 \\ \tilde{y} \\ \tilde{0} \end{array}\right\|$ | 号 | $N$ |  |  |  |
| Keylock switch <br> Position A basic position <br> Position $C$ maintained action <br> 1 switching element | $\begin{aligned} & A \\ & A \end{aligned}$ | C - $C$ | $\text { (C) } A$ | $\begin{aligned} & \text { 14-135. } \\ & 14-235 . \\ & 14-335 . \end{aligned}$ | 0 |  |  | $\frac{\mathrm{K}}{\mathrm{K}}$ | 34，5 | 41，5 |
| Keylock switch <br> Position A basic position <br> Position C maintained action <br> 2 switching elements | A | C | （）$\frac{a-c}{\text { a }}$ | $\begin{aligned} & 14-136 . \\ & 14-236 . \\ & 14-336 . \end{aligned}$ | 0 |  | 5 | $K$ $K$ $K$ $K$ | 42 |  |
| Keylock switch <br> Position A basic position <br> Position $C$ maintained action <br> 3 switching elements | $\begin{aligned} & \text { A } \\ & \text { A } \end{aligned}$ | C | （）$)^{-1}$ | $\begin{aligned} & 14-137 . \\ & 14-237 . \\ & 14-337 . \end{aligned}$ | 0 0 0 | － | 5 5 5 | $\frac{K}{k}$ | 49，5 |  |
| Keylock switch <br> Position A basic position <br> Position C maintained action <br> 4 switching elements | A | C - c | （）${ }^{-150}$ | $\begin{aligned} & 14-138 . \\ & 14-238 . \\ & 14-338 . \end{aligned}$ | 0 0 0 |  | 5 5 5 | $K$ <br> $K$ <br> $K$ | 57 |  |

Silver $=1$ ，gold－plated silver $=2$
Plug－in terminals $2,8 \times 0,5 \mathrm{~mm}=2$ ，soldering terminals $=5$

## Safety lock（Index K）

## Single locks（2 positions）

10 different locks with standard numbers 1001－1010．If the lock number is not specified，we will supply No．1001．An additional 690 locks with numbers 1011－1700 are available on request．For numbers 1001－1700 no master key can be supplied．Two keys are supplied with each keylock switch．

Spare keys for KABA safety locks may be ordered by quoting No．14－987（please state the lock number）．

## Combined locking systems

Information supplied on request．


## Safety lock (Index K)

## Single locks (2 positions)

10 different locks with standard numbers 1001-1010. If the lock number is not specified, we will supply No. 1001. An additional 690 locks with numbers 1011-1700 are available on request. For numbers 1001-1700 no master key can be supplied. Two keys are supplied with each keylock switch.

Spare keys for KABA safety locks may be ordered by quoting No. 14-987 (please state the lock number).

## Combined locking systems

Information supplied on request.


Switches Operated by a Short Lever (IP 65) with Low-level Switching Element


| Description | colour | Type No. |  |
| :---: | :---: | :---: | :---: |
| Indicators |  |  |  |
| Transparent lens cap | red <br> yellow <br> green <br> blue <br> clear | $\begin{aligned} & 704.603 .2 \\ & 704.603 .4 \\ & 704.603 .5 \\ & 704.603 .6 \\ & 704.603 .7 \end{aligned}$ |  |
| Translucent, knurled marking cap | white | $704.608 .9$ |  |
| Transparent, knurled marking cap (for neon lamps) | clear | $704.608 .7$ |  |
| lluminated pushbuttons |  |  |  |
| Front ring of aluminium | natural <br> anodized <br> black <br> anodized | $\begin{aligned} & 704.600 .1+ \\ & 704.600 .1 \mathrm{~A} \end{aligned}$ |  |
| Front ring of plastic | black light grey | $\begin{aligned} & 704.600 .0 \\ & 704.600 .6 \end{aligned}$ |  |
| Front ring, of chromium-treated plastic |  | $704.600 .4$ |  |
| Front ring of chromium-plated nickel steel |  | $704.600 .9$ |  |


| Description | Colour <br> opaque | Type No. |  |
| :---: | :---: | :---: | :---: |
| Translucent marking plate | black white | $\begin{aligned} & 704.609 .0 \\ & 704.609 .9 \end{aligned}$ | $5$ |
| Transparent, ribbed marking plate (for neon lamps) | clear | $704.609 .7$ |  |
| Translucent, ribbed marking cap for raised lenses | black white | $704.610 .9$ |  |
| Transparent, ribbed marking cap for raised lenses (for neon lamps) | clear | $704.610 .7$ |  |
| Raised, transparent lens | red yellow green clear | $\begin{aligned} & 704.611 .2 \\ & 704.611 .4 \\ & 704.611 .5 \\ & 704.611 .7 \end{aligned}$ |  |


| Description |  | Type No. |  |
| :---: | :---: | :---: | :---: |
| Series resistor to reduce the lamp voltage. Use with $60 \mathrm{~V} / 20 \mathrm{~mA}$ lamp rating | 110 V $2.7 \mathrm{k} \Omega$ <br> 125 V $3,3 \mathrm{k} \Omega$ <br> 145 V $4,7 \mathrm{k} \Omega$ <br> $230-240 \mathrm{~V}$ $10 \mathrm{k} \Omega$ | $\begin{aligned} & 02-904.0 \\ & 02-904.1 \\ & 02-904.3 \\ & 02-904.7 \end{aligned}$ |  |
| Capacitor <br> to reduce the lamp voltage. Use with $60 \mathrm{~V} / 20 \mathrm{~mA}$ lamp, 50 Hz | $230 \mathrm{~V} 0,3 \mu \mathrm{~F}$ | $02-917.0$ |  |
| Empty terminal plate for wiring resistors or capacitors | 5 spaces <br> 10 spaces <br> 15 spaces <br> 20 spaces | $\begin{aligned} & 02-912.1 \\ & 02-912.2 \\ & 02-912.3 \\ & 02-912.4 \end{aligned}$ |  |
| Terminal plate fitted with resistors or capacitors | $2,7 \mathrm{k} \Omega 110 / 60 \mathrm{~V}$ <br> 5 spaces <br> 10 spaces <br> 15 spaces <br> 20 spaces <br> $3,3 \mathrm{k} \Omega 125 / 60 \mathrm{~V}$ <br> 5 spaces <br> 10 spaces <br> 15 spaces <br> 20 spaces <br> $10 \mathrm{k} \Omega 230-240 / 60 \mathrm{~V}$ <br> 5 spaces <br> 10 spaces <br> 15 spaces <br> 20 spaces <br> $0,3 \mu \mathrm{~F} 230 / 60 \mathrm{~V}$ <br> 5 spaces <br> 10 spaces <br> 15 spaces <br> 20 spaces | $\begin{aligned} & 02-913.10 \\ & 02-913.20 \\ & 02-913.30 \\ & 02-913.40 \end{aligned}$ <br> 02-913.11 <br> 02-913.21 <br> 02-913.31 <br> 02-913.41 <br> 02-913.17 <br> 02-913.27 <br> 02-913.37 <br> 02-913.47 $\begin{aligned} & 02-914.10 \\ & 02-914.20 \\ & 02-914.30 \\ & 02-914.40 \end{aligned}$ |  |


| Description | Type No. |  |
| :---: | :---: | :---: |
| Axial PCB plug-in base for low-level switching elements $16,4 \mathrm{~mm}$ dia. $\times 9,8 \mathrm{~mm}$ high | $31-940$ |  |
| Right-angled PCB plug-in base for low-level switching elements <br> $17,9 \mathrm{~mm}$ square $\times 8,4 \mathrm{~mm}$ high <br> The withdrawable mounting pins allow the distance between the PCB plug-in base and the board to be varied by up to 3 mm | $31-941$ |  |
| Axial PCB plug-in base for axial snap-action switching element $2,8 \mathrm{~mm}$ $17,8 \mathrm{~mm}$ dia. $\times 9,8 \mathrm{~mm}$ high | $31-942$ |  |
| Connector for low-level switching elements Insulation socket for connector 31-945 | $31-945$ $31-928$ |  |
| Connector for axial snap-action switching element $2,8 \mathrm{~mm}$ Insulation socket for connector 31-946 | $31-946$ $31-929$ |  |



## Indicator - Engraving of marking cap

All marking plates and marking caps are engraved in lettering to DIN 1451, with black or white filling.
Can also be supplied with standard lettering or symbols.
For symbols see series 04.
Lettering to be engraved should be specified on a
separate order sheet.
(obtainable from us on request.)

|  |  | Number of letters per line approx. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 3 | 11 | 10 | 9 | 4,6 |
| 4 | 2 | 8 | 7 | - | 6.6 |
| 8 | 1 | 4 | - | - | - |



## Pushbutton/llluminated pushbuttons -

Engraving of marking plate or raised marking cap
All marking plates and marking caps are engraved in lettering to DIN 1451, with black or white filling.
Can also be supplied with standard lettering or symbols.
For symbols see series 04 .
Lettering to be engraved should be specified on a
separate order sheet.
(obtainable from us on request.)

|  |  | Number of letters per line approx. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3 | 3 | 9 | 9 | 7 | 4.6 |
| 4 | 2 | 7 | 6 | - | 6.6 |
| 8 | 1 | 3 | - | - | - |

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