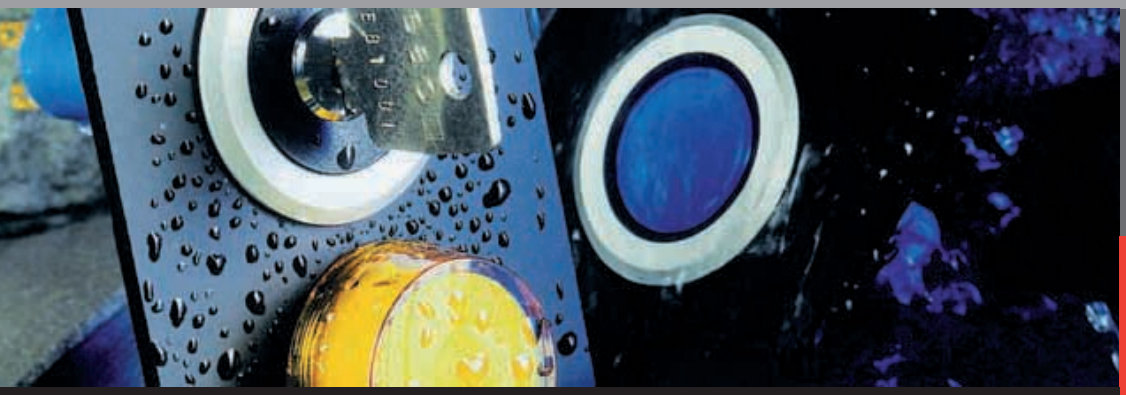
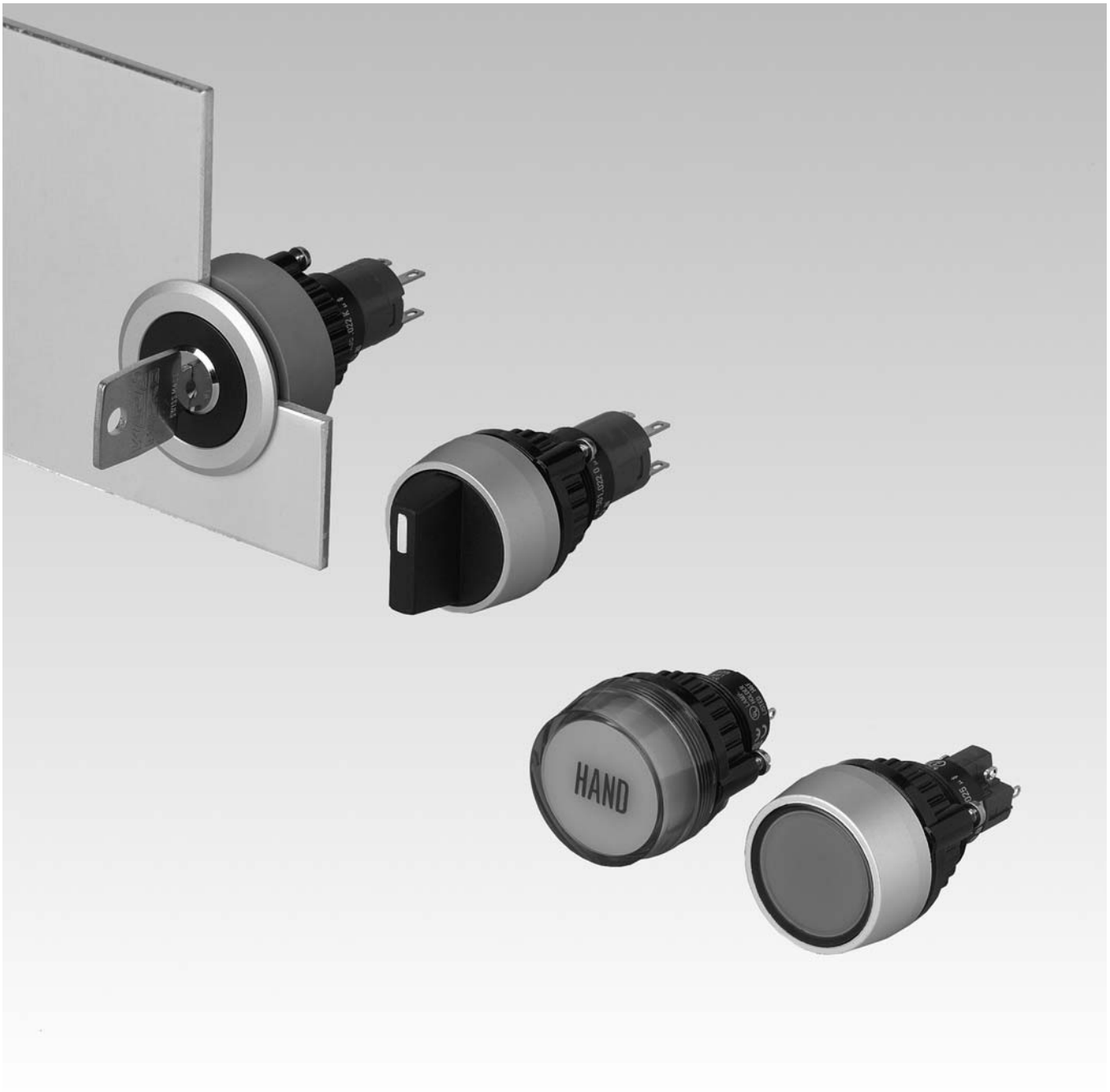
EAO – Your Expert Partner for
**Human Machine Interfaces**



# EAO Product Information

Series 14

eao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## Product Information

**General notes**
The Series 14 illuminated pushbuttons combine the robust actuators of the Series 04 with choice of either snap-action switching elements with gold plated silver contacts for one changeover only.
These pushbuttons have an IP 67 proof front (temporary emerson) and can be immersed to a depth of one metre.
The range includes pushbuttons, keylock switches and selector switches.
Anodized aluminium parts can have visible variations due production-technical reasons.

**Mounting**
Mounted from the front through either 22.5 mm dia cut out for raised or 30.5 mm dia for flush.
The pushbuttons are secured to the panel by means of a fixing ring/ nut and prevented from twisting by two srews.
To ensure correct positioning of the pushbuttons we can provide a positioning insert if required.
The Low Level switching elements with universal terminals allow them to PCB mounted. These terminals are also suitable for dip soldering. A plug-in base is available, which when soldered to the board allows the switch to be easily plugged-in.

**Lenses**
Lenses of transparent plastic or aluminium are available in various standard colours.

**Marking**
For further information about engraving, hot stamping and film inserts see part Marking.

**Illumination**
The T5.5 incandescent (filament) lamp (6, 12, 24, 28, 30, 36, 48 V) ensures perfect illumination of the lenses, which are supplied in various colours.
T5.5 Single-Chip LED (6, 12, 24, 28, 48 V) are also available in blue, green, red, white or yellow.
Do not solder the terminals directly, because of the high surface temperature.
Luminosity and wave length scattering caused by the technology used in the LED manufacturing processes may lead to visual differences in our products.

**Position indication**
The status of a maintained action switch can be determinded by the position of the lens.

**Keylock switch**
Single locks (2 positions).
There are 10 different locks with standard numbers 1001 ... 1010. If the lock number is not specified, we will supply standard number 1001.
Additional lock numbers are available on request.
Two keys are supplied with each keylock switch.
Spare keys for standard locks may be ordered by quoting Typ-Nr. 14-987 (please state the lock number).

**Specimen order**

Illuminated pushbutton :

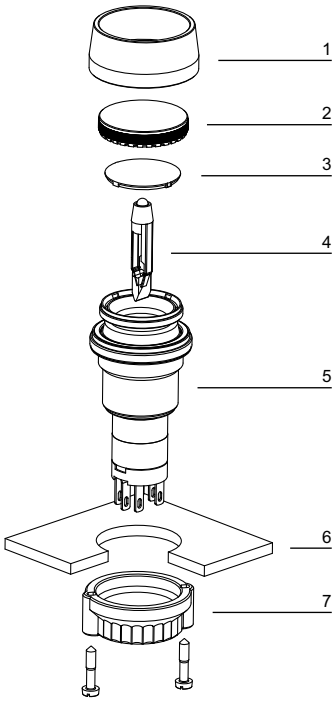
| | | |
|---|---|---|
| - | Illuminiated pushbutton actuator, 29 mm dia., snap-action switching element, 1NC + 1 NO, momentary action, soldering terminal | 14-131.0252 |

Essential accessories :

| | | |
|---|---|---|
| - | Lens plastic red | 704.602.2 |
| - | Marking plate white translucent | 704.609.9 |
| - | Front ring aluminium natural | 704.600.1 |
| - | Single-LED, T5.5, 12 VAC/DC, white | 10-2109.1069 |

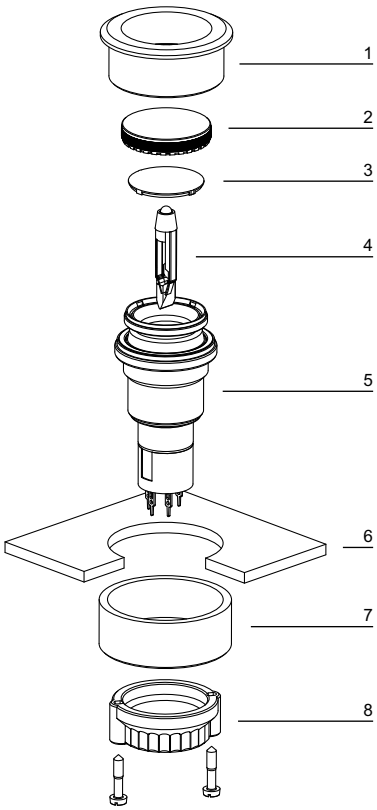
*We reserve the right to modify technical data*
*All dimensions in mm*

## Illuminated pushbutton, raised mounting



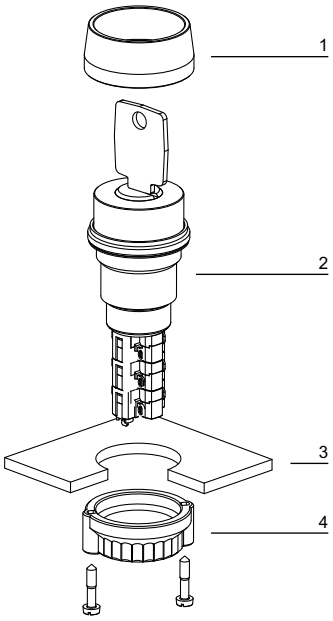

1 Front ring
2 Lens
3 Marking plate
4 LED
5 Actuator housing with switching element
6 Front plate
7 Fixing nut

## Illuminated pushbutton, flush mounting



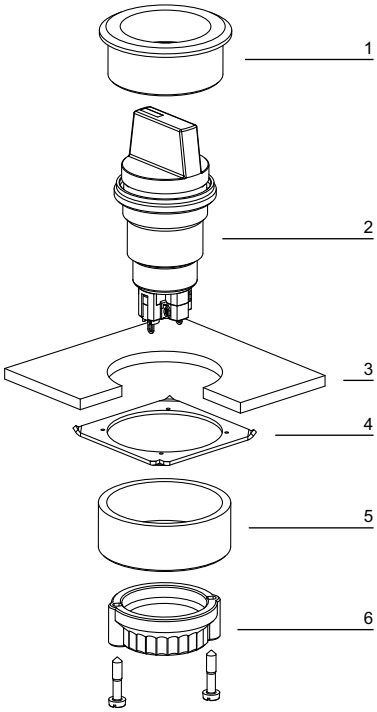

1 Front bezel set, flush mounting
2 Lens
3 Marking plate
4 LED
5 Actuator housing with switching element
6 Front panel
7 Pressure ring
8 Fixing nut

## Keylock switch, raised mounting




1 Front ring
2 Actuator housing with switching element
3 Front plate
4 Fixing nut

## Selector switch, flush mounting




1 Front ring
2 Actuator housing with switching element
3 Front plate
4 Anti-twist ring
5 Pressure ring
6 Fixing nut

## Indicator actuator full face illumination

**Essential Accessories:**

- Lens cap page 18
- Marking cap for Lens cap page 19
- Single-LED page 24

| | Front protection | Diode (1N 4007) | Terminals | Ø 29 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | [kg] |
|---|---|---|---|---|---|---|---|---|---|
| **Indicator actuator full face illumination** | IP 67 | 1 D | UT | **14-741.006** | 2 | 5 | 17 | 56 | 0.011 |
| | | 2 D | UT | **14-742.006** | 2 | 5 | 17 | 57 | 0.011 |
| | | - | S | **14-030.005** | | 5 | 17 | 3 | 0.010 |
| | | | S1 | **14-030.002** | | 5 | 17 | 3 | 0.010 |
| | | | UT | **14-031.006** | 2 | 5 | 17 | 2 | 0.011 |

Diode (1N 4007): D = Diode, - = without
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Indicator actuator front illumination

**Essential Accessories:**

- Front ring page 19
- Lens plastic page 17
- Marking plate for Lens plastic and metal page 18
- Single-LED page 24

| | Front protection | Terminals | Ø 29 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | [kg] |
|---|---|---|---|---|---|---|---|---|
| **Indicator actuator front illumination** | IP 67 | S | **14-040.005** | | 5 | 19 | 3 | 0.050 |
| | | S1 | **14-040.002** | | 5 | 19 | 3 | 0.050 |
| | | UT | **14-041.006** | 2 | 5 | 19 | 2 | 0.050 |

Terminals: S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm), UT = Universal terminal
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Buzzer

| | Front protection | Front cap | Terminals | Ø 29 mm Typ-Nr. | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|
| **Buzzer** Operation voltage 24 VDC | IP 65 | Brass nickel-plated | S1 | **14-810.902** | 5 | 1 | 1 | 0.016 |
| | | Plastic black | S1 | **14-810.002** | 5 | 1 | 1 | 0.016 |

Further information in the Technical Data and Typical Applications
Terminals: S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Illuminated actuator pushbutton

**Essential Accessories:**

- Front ring page 19
- Lens plastic page 17
- Marking plate for Lens plastic and metal page 18
- Single-LED page 24

| | Front protection | Switching system | Contacts | Diode (1N 4007) | Switching action | Terminals | Ø 29 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Illuminated actuator pushbutton** | IP 67 | LL | 1 NC | - | MA | UT | **14-476.036** | 2 | 5 | 20 | 12 | 0.015 |
| | | | | | M | UT | **14-436.036** | 2 | 5 | 20 | 39 | 0.015 |
| | | | 1 NC + 1 NO | - | MA | UT | **14-473.036** | 2 | 5 | 20 | 15 | 0.015 |
| | | | | | M | UT | **14-433.036** | 2 | 5 | 20 | 42 | 0.015 |
| | | | 1 NO | - | MA | UT | **14-475.036** | 2 | 5 | 20 | 14 | 0.015 |
| | | | | | M | UT | **14-435.036** | 2 | 5 | 20 | 41 | 0.015 |
| | | | 2 NC | - | MA | UT | **14-472.036** | 2 | 5 | 20 | 13 | 0.015 |
| | | | | | M | UT | **14-432.036** | 2 | 5 | 20 | 40 | 0.015 |
| | | | 2 NO | - | MA | UT | **14-471.036** | 2 | 5 | 20 | 16 | 0.015 |
| | | | | | M | UT | **14-431.036** | 2 | 5 | 20 | 43 | 0.015 |
| | | SA | 1 NC + 1 NO | 1 D | MA | UT | **14-747.0292** | 2 | 5 | 20 | 9 | 0.014 |
| | | | | | M | UT | **14-743.0292** | 2 | 5 | 20 | 36 | 0.014 |
| | | | | 2 D | MA | UT | **14-748.0292** | 2 | 5 | 20 | 10 | 0.014 |
| | | | | | M | UT | **14-744.0292** | 2 | 5 | 20 | 37 | 0.014 |
| | | | | - | MA | S | **14-271.0252** | | 5 | 20 | 11 | 0.013 |
| | | | | | | S1 | **14-271.022** | | 5 | 20 | 11 | 0.013 |
| | | | | | M | S | **14-131.0252** | | 5 | 20 | 38 | 0.013 |
| | | | | | | S1 | **14-131.022** | | 5 | 20 | 38 | 0.013 |
| | | | 2 NC + 2 NO | 1 D | MA | UT | **14-749.0292** | 2 | 5 | 20 | 6 | 0.016 |
| | | | | | M | UT | **14-745.0292** | 2 | 5 | 20 | 33 | 0.016 |
| | | | | 2 D | MA | UT | **14-750.0292** | 2 | 5 | 20 | 7 | 0.016 |
| | | | | | M | UT | **14-746.0292** | 2 | 5 | 20 | 34 | 0.016 |
| | | | | - | MA | S | **14-272.0252** | | 5 | 20 | 8 | 0.015 |
| | | | | | M | S | **14-132.0252** | | 5 | 20 | 35 | 0.015 |
| | | | 3 NC + 3 NO | - | MA | S | **14-273.0252** | | 5 | 20 | 5 | 0.017 |
| | | | | | M | S | **14-133.0252** | | 5 | 20 | 32 | 0.017 |
| | | | 4 NC + 4 NO | - | MA | S | **14-274.0252** | | 5 | 20 | 4 | 0.019 |
| | | | | | M | S | **14-134.0252** | | 5 | 20 | 31 | 0.019 |

Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Diode (1N 4007): - = without, D = Diode
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Mushroom-head actuator pushbutton

**Essential Accessories:**

- Front ring page 19
- Marking plate for Mushroom-head cap page 18
- Mushroom-head cap page 18

| | Front protection | Switching system | Contacts | Switching action | Terminals | Ø 40 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mushroom-head actuator pushbutton** | IP 67 | LL | 1 NC | MA | UT | **14-476.036** | 2 | 2 | 18 | 12 | 0.015 |
| | | | | M | UT | **14-436.036** | 2 | 2 | 18 | 39 | 0.015 |
| | | | 1 NC + 1 NO | MA | UT | **14-473.036** | 2 | 2 | 18 | 15 | 0.015 |
| | | | | M | UT | **14-433.036** | 2 | 2 | 18 | 42 | 0.015 |
| | | | 1 NO | MA | UT | **14-475.036** | 2 | 2 | 18 | 14 | 0.015 |
| | | | | M | UT | **14-435.036** | 2 | 2 | 18 | 41 | 0.015 |
| | | | 2 NC | MA | UT | **14-472.036** | 2 | 2 | 18 | 13 | 0.015 |
| | | | | M | UT | **14-432.036** | 2 | 2 | 18 | 40 | 0.015 |
| | | | 2 NO | MA | UT | **14-471.036** | 2 | 2 | 18 | 16 | 0.015 |
| | | | | M | UT | **14-431.036** | 2 | 2 | 18 | 43 | 0.015 |
| | | SA | 1 NC + 1 NO | MA | S | **14-271.0252** | | 2 | 18 | 11 | 0.013 |
| | | | | | S1 | **14-271.022** | | 2 | 18 | 11 | 0.013 |
| | | | | M | S | **14-131.0252** | | 2 | 18 | 38 | 0.013 |
| | | | | | S1 | **14-131.022** | | 2 | 18 | 38 | 0.013 |
| | | | 2 NC + 2 NO | MA | S | **14-272.0252** | | 2 | 18 | 8 | 0.015 |
| | | | | M | S | **14-132.0252** | | 2 | 18 | 35 | 0.015 |
| | | | 3 NC + 3 NO | MA | S | **14-273.0252** | | 2 | 18 | 5 | 0.017 |
| | | | | M | S | **14-133.0252** | | 2 | 18 | 32 | 0.017 |
| | | | 4 NC + 4 NO | MA | S | **14-274.0252** | | 2 | 18 | 4 | 0.019 |
| | | | | M | S | **14-134.0252** | | 2 | 18 | 31 | 0.019 |

Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Illuminated mushroom-head actuator pushbutton

**Essential Accessories:**

- Front ring page 19
- Marking plate for Mushroom-head cap page 18
- Mushroom-head cap illuminated page 18
- Single-LED page 24

| | Front protection | Switching system | Contacts | Diode (1N 4007) | Switching action | Terminals | Ø 40 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Illuminated mushroom-head actuator pushbutton** | IP 67 | LL | 1 NC | - | MA | UT | **14-476.036** | 2 | 2 | 18 | 12 | 0.015 |
| | | | | | M | UT | **14-436.036** | 2 | 2 | 18 | 39 | 0.015 |
| | | | 1 NC + 1 NO | - | MA | UT | **14-473.036** | 2 | 2 | 18 | 15 | 0.015 |
| | | | | | M | UT | **14-433.036** | 2 | 2 | 18 | 42 | 0.015 |
| | | | 1 NO | - | MA | UT | **14-475.036** | 2 | 2 | 18 | 14 | 0.015 |
| | | | | | M | UT | **14-435.036** | 2 | 2 | 18 | 41 | 0.015 |
| | | | 2 NC | - | MA | UT | **14-472.036** | 2 | 2 | 18 | 13 | 0.015 |
| | | | | | M | UT | **14-432.036** | 2 | 2 | 18 | 40 | 0.015 |
| | | | 2 NO | - | MA | UT | **14-471.036** | 2 | 2 | 18 | 16 | 0.015 |
| | | | | | M | UT | **14-431.036** | 2 | 2 | 18 | 43 | 0.015 |
| | | SA | 1 NC + 1 NO | 1 D | MA | UT | **14-747.0292** | 2 | 2 | 18 | 9 | 0.014 |
| | | | | | M | UT | **14-743.0292** | 2 | 2 | 18 | 36 | 0.014 |
| | | | | 2 D | MA | UT | **14-748.0292** | 2 | 2 | 18 | 10 | 0.014 |
| | | | | | M | UT | **14-744.0292** | 2 | 2 | 18 | 37 | 0.014 |
| | | | | - | MA | S | **14-271.0252** | | 2 | 18 | 11 | 0.013 |
| | | | | | | S1 | **14-271.022** | | 2 | 18 | 11 | 0.013 |
| | | | | | M | S | **14-131.0252** | | 2 | 18 | 38 | 0.013 |
| | | | | | | S1 | **14-131.022** | | 2 | 18 | 38 | 0.013 |
| | | | 2 NC + 2 NO | 1 D | MA | UT | **14-749.0292** | 2 | 2 | 18 | 6 | 0.016 |
| | | | | | M | UT | **14-745.0292** | 2 | 2 | 18 | 33 | 0.016 |
| | | | | 2 D | MA | UT | **14-750.0292** | 2 | 2 | 18 | 7 | 0.016 |
| | | | | | M | UT | **14-746.0292** | 2 | 2 | 18 | 34 | 0.016 |
| | | | | - | MA | S | **14-272.0252** | | 2 | 18 | 8 | 0.015 |
| | | | | | M | S | **14-132.0252** | | 2 | 18 | 35 | 0.015 |
| | | | 3 NC + 3 NO | - | MA | S | **14-273.0252** | | 2 | 18 | 5 | 0.017 |
| | | | | | M | S | **14-133.0252** | | 2 | 18 | 32 | 0.017 |
| | | | 4 NC + 4 NO | - | MA | S | **14-274.0252** | | 2 | 18 | 4 | 0.019 |
| | | | | | M | S | **14-134.0252** | | 2 | 18 | 31 | 0.019 |

Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Diode (1N 4007): - = without, D = Diode
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

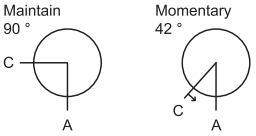
## Keylock switch 2 positions

| Maintain 90 ° / Momentary 42 ° | Front protection | Front ring | Switching system | Contacts | Switching action | Terminals | Key remove | Ø 29 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Keylock switch 2 positions**<br>Position A : Basic position<br>Position C : Maintained action<br>Standard lock 1001,<br>Front : Plastic black | IP 65 | Aluminium natural | LL | 1 NC + 1 NO | MA | UT | A | **14-415.036K** | 2 | 5 | 21 | 54 | 0.030 |
| | | | | | | | C | **14-418.036K** | 2 | 5 | 21 | 54 | 0.030 |
| | | | | | | | C + A | **14-412.036K** | 2 | 5 | 21 | 54 | 0.030 |
| | | | | 2 NO | MA | UT | A | **14-414.036K** | 2 | 5 | 21 | 55 | 0.030 |
| | | | | | | | C | **14-417.036K** | 2 | 5 | 21 | 55 | 0.030 |
| | | | | | | | C + A | **14-411.036K** | 2 | 5 | 21 | 55 | 0.030 |
| | | | SA | 1 NC + 1 NO | MA | S | A | **14-235.025K2** | | 5 | 21 | 50 | 0.029 |
| | | | | | | | C | **14-335.025K2** | | 5 | 21 | 50 | 0.029 |
| | | | | | | | C + A | **14-135.025K2** | | 5 | 21 | 50 | 0.029 |
| | | | | | | S1 | A | **14-235.022K** | | 5 | 21 | 50 | 0.029 |
| | | | | | | | C | **14-335.022K** | | 5 | 21 | 50 | 0.029 |
| | | | | | | | C + A | **14-135.022K** | | 5 | 21 | 50 | 0.029 |
| | | | | 2 NC + 2 NO | MA | S | A | **14-236.025K2** | | 5 | 21 | 51 | 0.031 |
| | | | | | | | C | **14-336.025K2** | | 5 | 21 | 51 | 0.031 |
| | | | | | | | C + A | **14-136.025K2** | | 5 | 21 | 51 | 0.031 |
| | | | | 3 NC + 3 NO | MA | S | A | **14-237.025K2** | | 5 | 21 | 52 | 0.033 |
| | | | | | | | C | **14-337.025K2** | | 5 | 21 | 52 | 0.033 |
| | | | | | | | C + A | **14-137.025K2** | | 5 | 21 | 52 | 0.033 |
| | | | | 4 NC + 4 NO | MA | S | A | **14-238.025K2** | | 5 | 21 | 53 | 0.035 |
| | | | | | | | C | **14-338.025K2** | | 5 | 21 | 53 | 0.035 |
| | | | | | | | C + A | **14-138.025K2** | | 5 | 21 | 53 | 0.035 |
| Position A : Basic position<br>Position C : Momentary action<br>Standard lock 1001<br>Front : Plastic black | IP 65 | Aluminium natural | LL | 1 NC + 1 NO | M | UT | A | **14-438.036K** | 2 | 5 | 21 | 48 | 0.030 |
| | | | | 2 NO | M | UT | A | **14-437.036K** | 2 | 5 | 21 | 49 | 0.030 |
| | | | SA | 1 NC + 1 NO | M | S | A | **14-141.025K2** | | 5 | 21 | 44 | 0.029 |
| | | | | | | S1 | A | **14-141.022K** | | 5 | 21 | 44 | 0.029 |
| | | | | 2 NC + 2 NO | M | S | A | **14-142.025K2** | | 5 | 21 | 45 | 0.031 |
| | | | | 3 NC + 3 NO | M | S | A | **14-143.025K2** | | 5 | 21 | 46 | 0.033 |
| | | | | 4 NC + 4 NO | M | S | A | **14-144.025K2** | | 5 | 21 | 47 | 0.035 |

Keylock switches are supplied with 2 keys.
Other lock numbers on request
Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Selector switch 2 positions

non-illuminative




| | Front protection | Front ring | Lever | Switching system | Contacts | Switching action | Terminals | Ø 29 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Selector switch 2 positions** Position A : Basic position | IP 67 | Aluminium natural | Plastic black long | LL | 1 NC + 1 NO | MA | UT | **14-572.0360** | 2 | 5 | 22 | 29 | 0.025 |
| | | | | | | M | UT | **14-567.0360** | 2 | 5 | 22 | 22 | 0.025 |
| | | | | | 2 NC | MA | UT | **14-571.0360** | 2 | 5 | 22 | 28 | 0.025 |
| | | | | | | M | UT | **14-566.0360** | 2 | 5 | 22 | 21 | 0.025 |
| | | | | | 2 NO | MA | UT | **14-570.0360** | 2 | 5 | 22 | 30 | 0.025 |
| | | | | | | M | UT | **14-565.0360** | 2 | 5 | 22 | 23 | 0.025 |
| | | | | SA | 1 NC + 1 NO | MA | S | **14-556.02502** | | 5 | 22 | 24 | 0.024 |
| | | | | | | | S1 | **14-556.0220** | | 5 | 22 | 24 | 0.024 |
| | | | | | | M | S | **14-551.02502** | | 5 | 22 | 17 | 0.024 |
| | | | | | | | S1 | **14-551.0220** | | 5 | 22 | 17 | 0.024 |
| | | | | | 2 NC + 2 NO | MA | S | **14-557.02502** | | 5 | 22 | 25 | 0.026 |
| | | | | | | M | S | **14-552.02502** | | 5 | 22 | 18 | 0.026 |
| | | | | | 3 NC + 3 NO | MA | S | **14-558.02502** | | 5 | 22 | 26 | 0.028 |
| | | | | | | M | S | **14-553.02502** | | 5 | 22 | 19 | 0.028 |
| | | | | | 4 NC + 4 NO | MA | S | **14-559.02502** | | 5 | 22 | 27 | 0.030 |
| | | | | | | M | S | **14-554.02502** | | 5 | 22 | 20 | 0.030 |
| | | | Plastic black short | LL | 1 NC + 1 NO | MA | UT | **14-522.0360** | 2 | 5 | 23 | 29 | 0.025 |
| | | | | | | M | UT | **14-517.0360** | 2 | 5 | 23 | 22 | 0.025 |
| | | | | | 2 NC | MA | UT | **14-521.0360** | 2 | 5 | 23 | 28 | 0.025 |
| | | | | | | M | UT | **14-516.0360** | 2 | 5 | 23 | 21 | 0.025 |
| | | | | | 2 NO | MA | UT | **14-520.0360** | 2 | 5 | 23 | 30 | 0.025 |
| | | | | | | M | UT | **14-515.0360** | 2 | 5 | 23 | 23 | 0.025 |
| | | | | SA | 1 NC + 1 NO | MA | S | **14-506.02502** | | 5 | 23 | 24 | 0.024 |
| | | | | | | | S1 | **14-506.0220** | | 5 | 23 | 24 | 0.024 |
| | | | | | | M | S | **14-501.02502** | | 5 | 23 | 17 | 0.024 |
| | | | | | | | S1 | **14-501.0220** | | 5 | 23 | 17 | 0.024 |
| | | | | | 2 NC + 2 NO | MA | S | **14-507.02502** | | 5 | 23 | 25 | 0.026 |
| | | | | | | M | S | **14-502.02502** | | 5 | 23 | 18 | 0.026 |
| | | | | | 3 NC + 3 NO | MA | S | **14-508.02502** | | 5 | 23 | 26 | 0.028 |
| | | | | | | M | S | **14-503.02502** | | 5 | 23 | 19 | 0.028 |
| | | | | | 4 NC + 4 NO | MA | S | **14-509.02502** | | 5 | 23 | 27 | 0.030 |
| | | | | | | M | S | **14-504.02502** | | 5 | 23 | 20 | 0.030 |

Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Indicator actuator, flush mounting

**Essential Accessories:**

- Front bezel set, flush mounting page 20
- Lens plastic page 17
- Marking plate for Lens plastic and metal page 18
- Single-LED page 24

| | Front protection | Terminals | Ø 35 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|
| **Indicator actuator, flush mounting** | IP 67 | S | **14-040.005** | | 1 | 24 | 3 | 0.050 |
| | | S1 | **14-040.002** | | 1 | 24 | 3 | 0.050 |
| | | UT | **14-041.006** | 2 | 1 | 24 | 2 | 0.050 |

Terminals: S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm), UT = Universal terminal
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Buzzer, flush mounting

| | Front protection | Front cap | Terminals | Ø 35 mm Typ-Nr. | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|
| **Buzzer, flush mounting** Operation voltage : 24 VDC | IP 40 | Aluminium black | S1 | **14-810.910** | 1 | 16 | 1 | 0.016 |
| | | Aluminium natural | S1 | **14-810.918** | 1 | 16 | 1 | 0.016 |

Further information in the Technical Data and Typical Applications
Terminals: S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Illuminated pushbutton actuator, flush mounting

**Essential Accessories:**

- Front bezel set, flush mounting page 20
- Lens plastic page 17
- Marking plate for Lens plastic and metal page 18
- Single-LED page 24

| | Front protection | Switching system | Contacts | Diode (1N 4007) | Switching action | Terminals | Ø 35 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Illuminated pushbutton actuator, flush mounting** | IP 67 | LL | 1 NC | - | MA | UT | **14-476.036** | 2 | 1 | 25 | 12 | 0.015 |
| | | | | | M | UT | **14-436.036** | 2 | 1 | 25 | 39 | 0.015 |
| | | | 1 NC + 1 NO | - | MA | UT | **14-473.036** | 2 | 1 | 25 | 15 | 0.015 |
| | | | | | M | UT | **14-433.036** | 2 | 1 | 25 | 42 | 0.015 |
| | | | 1 NO | - | MA | UT | **14-475.036** | 2 | 1 | 25 | 14 | 0.015 |
| | | | | | M | UT | **14-435.036** | 2 | 1 | 25 | 41 | 0.015 |
| | | | 2 NC | - | MA | UT | **14-472.036** | 2 | 1 | 25 | 13 | 0.015 |
| | | | | | M | UT | **14-432.036** | 2 | 1 | 25 | 40 | 0.015 |
| | | | 2 NO | - | MA | UT | **14-471.036** | 2 | 1 | 25 | 16 | 0.015 |
| | | | | | M | UT | **14-431.036** | 2 | 1 | 25 | 43 | 0.015 |
| | | SA | 1 NC + 1 NO | 1 D | MA | UT | **14-747.0292** | 2 | 1 | 25 | 9 | 0.014 |
| | | | | | M | UT | **14-743.0292** | 2 | 1 | 25 | 36 | 0.014 |
| | | | | 2 D | MA | UT | **14-748.0292** | 2 | 1 | 25 | 10 | 0.014 |
| | | | | | M | UT | **14-744.0292** | 2 | 1 | 25 | 37 | 0.014 |
| | | | | - | MA | S | **14-271.0252** | | 1 | 25 | 11 | 0.013 |
| | | | | | | S1 | **14-271.022** | | 1 | 25 | 11 | 0.013 |
| | | | | | M | S | **14-131.0252** | | 1 | 25 | 38 | 0.013 |
| | | | | | | S1 | **14-131.022** | | 1 | 25 | 38 | 0.013 |
| | | | 2 NC + 2 NO | 1 D | MA | UT | **14-749.0292** | 2 | 1 | 25 | 6 | 0.016 |
| | | | | | M | UT | **14-745.0292** | 2 | 1 | 25 | 33 | 0.016 |
| | | | | 2 D | MA | UT | **14-750.0292** | 2 | 1 | 25 | 7 | 0.016 |
| | | | | | M | UT | **14-746.0292** | 2 | 1 | 25 | 34 | 0.016 |
| | | | | - | MA | S | **14-272.0252** | | 1 | 25 | 8 | 0.015 |
| | | | | | M | S | **14-132.0252** | | 1 | 25 | 35 | 0.015 |
| | | | 3 NC + 3 NO | - | MA | S | **14-273.0252** | | 1 | 25 | 5 | 0.017 |
| | | | | | M | S | **14-133.0252** | | 1 | 25 | 32 | 0.017 |
| | | | 4 NC + 4 NO | - | MA | S | **14-274.0252** | | 1 | 25 | 4 | 0.019 |
| | | | | | M | S | **14-134.0252** | | 1 | 25 | 31 | 0.019 |

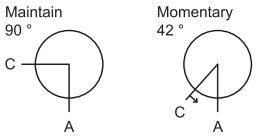
Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Diode (1N 4007): - = without, D = Diode
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Keylock switch actuator 2 positions, flush mounting

**Essential Accessories:**

Anti-twist ring, flush mounting page 25

Front bezel set, flush mounting page 20



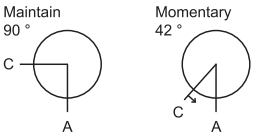

| | Front protection | Switching system | Contacts | Switching action | Terminals | Key remove | Ø 35 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Keylock switch actuator 2 positions, flush mounting**<br>Position A : Basic position<br>Position C : Maintained action<br>Standard lock 1001,<br>Front : Plastic black | IP 65 | LL | 1 NC + 1 NO | MA | UT | A | **14-415.036K** | 2 | 1 | 26 | 54 | 0.030 |
| | | | | | | C | **14-418.036K** | 2 | 1 | 26 | 54 | 0.030 |
| | | | | | | C + A | **14-412.036K** | 2 | 1 | 26 | 54 | 0.030 |
| | | | 2 NO | MA | UT | A | **14-414.036K** | 2 | 1 | 26 | 55 | 0.030 |
| | | | | | | C | **14-417.036K** | 2 | 1 | 26 | 55 | 0.030 |
| | | | | | | C + A | **14-411.036K** | 2 | 1 | 26 | 55 | 0.030 |
| | | SA | 1 NC + 1 NO | MA | S | A | **14-235.025K2** | | 1 | 26 | 50 | 0.029 |
| | | | | | | C | **14-335.025K2** | | 1 | 26 | 50 | 0.029 |
| | | | | | | C + A | **14-135.025K2** | | 1 | 26 | 50 | 0.029 |
| | | | | | S1 | A | **14-235.022K** | | 1 | 26 | 50 | 0.029 |
| | | | | | | C | **14-335.022K** | | 1 | 26 | 50 | 0.029 |
| | | | | | | C + A | **14-135.022K** | | 1 | 26 | 50 | 0.029 |
| | | | 2 NC + 2 NO | MA | S | A | **14-236.025K2** | | 1 | 26 | 51 | 0.031 |
| | | | | | | C | **14-336.025K2** | | 1 | 26 | 51 | 0.031 |
| | | | | | | C + A | **14-136.025K2** | | 1 | 26 | 51 | 0.031 |
| | | | 3 NC + 3 NO | MA | S | A | **14-237.025K2** | | 1 | 26 | 52 | 0.033 |
| | | | | | | C | **14-337.025K2** | | 1 | 26 | 52 | 0.033 |
| | | | | | | C + A | **14-137.025K2** | | 1 | 26 | 52 | 0.033 |
| | | | 4 NC + 4 NO | MA | S | A | **14-238.025K2** | | 1 | 26 | 53 | 0.035 |
| | | | | | | C | **14-338.025K2** | | 1 | 26 | 53 | 0.035 |
| | | | | | | C + A | **14-138.025K2** | | 1 | 26 | 53 | 0.035 |
| Position A : Basic position<br>Position C : Momentary action<br>Standard lock 1001<br>Front : Plastic black | IP 65 | LL | 1 NC + 1 NO | M | UT | A | **14-438.036K** | 2 | 1 | 26 | 48 | 0.030 |
| | | | 2 NO | M | UT | A | **14-437.036K** | 2 | 1 | 26 | 49 | 0.030 |
| | | SA | 1 NC + 1 NO | M | S | A | **14-141.025K2** | | 1 | 26 | 44 | 0.029 |
| | | | | | S1 | A | **14-141.022K** | | 1 | 26 | 44 | 0.029 |
| | | | 2 NC + 2 NO | M | S | A | **14-142.025K2** | | 1 | 26 | 45 | 0.031 |
| | | | 3 NC + 3 NO | M | S | A | **14-143.025K2** | | 1 | 26 | 46 | 0.033 |
| | | | 4 NC + 4 NO | M | S | A | **14-144.025K2** | | 1 | 26 | 47 | 0.035 |

Keylock switches are supplied with 2 keys.
Other lock numbers on request
Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Selector switch actuator 2 positions, flush mounting

**Essential Accessories:**

- Anti-twist ring, flush mounting page 25
- Front bezel set, flush mounting page 20




| | Front protection | Lever | Switching system | Contacts | Switching action | Terminals | Ø 35 mm Typ-Nr. | Component layout | Mounting dimensions | Technical drawing | Circuit drawing | kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Selector switch actuator 2 positions, flush mounting** Position A : Basic position | IP 67 | Plastic black short | LL | 1 NC + 1 NO | MA | UT | **14-522.0360** | 2 | 1 | 27 | 29 | 0.025 |
| | | | | | M | UT | **14-517.0360** | 2 | 1 | 27 | 22 | 0.025 |
| | | | | 2 NC | MA | UT | **14-521.0360** | 2 | 1 | 27 | 28 | 0.025 |
| | | | | | M | UT | **14-516.0360** | 2 | 1 | 27 | 21 | 0.025 |
| | | | | 2 NO | MA | UT | **14-520.0360** | 2 | 1 | 27 | 30 | 0.025 |
| | | | | | M | UT | **14-515.0360** | 2 | 1 | 27 | 23 | 0.025 |
| | | | SA | 1 NC + 1 NO | MA | S | **14-506.02502** | | 1 | 27 | 24 | 0.024 |
| | | | | | | S1 | **14-506.0220** | | 1 | 27 | 24 | 0.024 |
| | | | | | M | S | **14-501.02502** | | 1 | 27 | 17 | 0.024 |
| | | | | | | S1 | **14-501.0220** | | 1 | 27 | 17 | 0.024 |
| | | | | 2 NC + 2 NO | MA | S | **14-507.02502** | | 1 | 27 | 25 | 0.026 |
| | | | | | M | S | **14-502.02502** | | 1 | 27 | 18 | 0.026 |
| | | | | 3 NC + 3 NO | MA | S | **14-508.02502** | | 1 | 27 | 26 | 0.028 |
| | | | | | M | S | **14-503.02502** | | 1 | 27 | 19 | 0.028 |
| | | | | 4 NC + 4 NO | MA | S | **14-509.02502** | | 1 | 27 | 27 | 0.030 |
| | | | | | M | S | **14-504.02502** | | 1 | 27 | 20 | 0.030 |

Switching system: LL = Low level switching element, SA = Snap-action switching element
Contacts: NC = Normally closed, NO = Normally open
Switching action: MA = Maintained action, M = Momentary action
Terminals: UT = Universal terminal, S = Soldering terminal, S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Component layout from page 36, Mounting dimensions from page 37, Technical drawing from page 38, Circuit drawing from page 48

## Front

### Lens plastic

To obtain IP 67 use Marking plate Typ-Nr. 704.609.X

| | Lens | Ø 29 mm Typ-Nr. | kg |
|---|---|---|---|
| **Lens plastic** | black opaque flush | **704.602.0** | 0.001 |
| | blue transparent flush | **704.602.6** | 0.001 |
| | colourless transparent flush | **704.602.7** | 0.001 |
| | green transparent flush | **704.602.5** | 0.001 |
| | red transparent flush | **704.602.2** | 0.001 |
| | yellow transparent flush | **704.602.4** | 0.001 |

### Lens raised, plastic

To obtain IP 67 use Marking plate Typ-Nr. 704.610.X

| | Lens | Ø 29 mm Typ-Nr. | kg |
|---|---|---|---|
| **Lens raised, plastic** | colourless transparent flush | **704.611.7** | 0.002 |
| | green transparent flush | **704.611.5** | 0.002 |
| | red transparent flush | **704.611.2** | 0.002 |
| | yellow transparent flush | **704.611.4** | 0.002 |

### Lens metal with spot

To obtain IP 67 use Marking plate Typ-Nr. 704.609.X

| | Lens | Ø 29 mm Typ-Nr. | kg |
|---|---|---|---|
| **Lens metal with spot** | Aluminium black flush | **704.601.01** | 0.001 |
| | Aluminium blue flush | **704.601.61** | 0.001 |
| | Aluminium gold flush | **704.601.41** | 0.001 |
| | Aluminium natural flush | **704.601.81** | 0.001 |
| | Aluminium olive-green flush | **704.601.51** | 0.001 |
| | Aluminium red flush | **704.601.21** | 0.001 |
| | Stainless steel natural flush | **704.601.91** | 0.001 |

### Lens metal

To obtain IP 67 use Marking plate Typ-Nr. 704.609.9

| | Lens | Ø 29 mm Typ-Nr. | kg |
|---|---|---|---|
| **Lens metal** | Aluminium black flush | **704.601.0** | 0.001 |
| | Aluminium blue flush | **704.601.6** | 0.001 |
| | Aluminium gold flush | **704.601.4** | 0.001 |
| | Aluminium natural flush | **704.601.8** | 0.001 |
| | Aluminium olive-green flush | **704.601.5** | 0.001 |
| | Aluminium red flush | **704.601.2** | 0.001 |
| | Stainless steel natural flush | **704.601.9** | 0.001 |

## Lens cap

To obtain IP 67 use Marking plate Typ-Nr. 704.608.X

| | Lens | Ø 29 mm Typ-Nr. | kg |
|---|---|---|---|
| **Lens cap** | Plastic blue transparent | **704.603.6** | 0.003 |
| | Plastic colourless transparent | **704.603.7** | 0.003 |
| | Plastic green transparent | **704.603.5** | 0.003 |
| | Plastic red transparent | **704.603.2** | 0.003 |
| | Plastic yellow transparent | **704.603.4** | 0.003 |

## Mushroom-head cap

To obtain IP 67 use Marking plate Typ-Nr. 704.609.9

| | Mushroom had cap | Ø 40 mm Typ-Nr. | kg |
|---|---|---|---|
| **Mushroom-head cap** | Plastic black opaque | **704.604.0** | 0.001 |
| | Plastic green opaque | **704.604.5** | 0.001 |
| | Plastic red opaque | **704.604.2** | 0.001 |
| | Plastic yellow opaque | **704.604.4** | 0.001 |

## Mushroom-head cap illuminated

To obtain IP 67 use Marking plate Typ-Nr. 704.609.9

| | Mushroom had cap | Ø 40 mm Typ-Nr. | kg |
|---|---|---|---|
| **Mushroom-head cap illuminated** | Plastic blue transparent | **704.614.6** | 0.007 |
| | Plastic colourless transparent | **704.614.7** | 0.007 |
| | Plastic green transparent | **704.614.5** | 0.007 |
| | Plastic red transparent | **704.614.2** | 0.007 |
| | Plastic yellow transparent | **704.614.4** | 0.007 |

## Marking plate for Lens plastic and metal

| | Marking plate | Typ-Nr. | kg |
|---|---|---|---|
| **Marking plate for Lens plastic and metal** LED | Plastic colourless transparent ribbed | **704.609.7** | 0.001 |
| LED and Filament lamp | Plastic white translucent | **704.609.9** | 0.001 |
| non-illuminative | Plastic black opaque | **704.609.0** | 0.001 |

## Marking plate for Mushroom-head cap

| | Marking plate | Typ-Nr. | kg |
|---|---|---|---|
| **Marking plate for Mushroom-head cap** | Plastic white translucent | **704.609.9** | 0.001 |

## Marking cap for Lens raised, plastic

| | Marking cap | Typ-Nr. | kg |
|---|---|---|---|
| **Marking cap for Lens raised, plastic** LED | Plastic colourless transparent ribbed | **704.610.7** | 0.001 |
| LED and Filament lamp | Plastic white translucent | **704.610.9** | 0.001 |

## Marking cap for Lens cap

| | Marking cap | Typ-Nr. | kg |
|---|---|---|---|
| **Marking cap for Lens cap** LED | Plastic colourless transparent ribbed | **704.608.7** | 0.002 |
| LED and Filament lamp | Plastic white translucent | **704.608.9** | 0.002 |

## Front ring

| | Ø 29 mm Typ-Nr. | kg |
|---|---|---|
| **Front ring** | **704.600.0** | 0.003 |
| | **704.600.6** | 0.003 |
| | **704.600.1** | 0.005 |
| | **704.600.1A** | 0.005 |
| | **704.600.9** | 0.006 |

## Front bezel set for Mushroom-head pushbutton

| | Front Bezel | Ø 50 mm Typ-Nr. | Mounting dimensions | Technical drawing | kg |
|---|---|---|---|---|---|
| **Front bezel set for Mushroom-head pushbutton** | Aluminium black | **14-958.0** | 4 | 28 | 0.042 |
| | Aluminium natural | **14-958.8** | 4 | 28 | 0.042 |

Mounting dimensions from page 37, Technical drawing from page 38

## Front bezel set, flush mounting

| | Front bezel | Ø 35 mm Typ-Nr. | Mounting dimensions | kg |
|---|---|---|---|---|
| **Front bezel set, flush mounting** | Aluminium black | **704.955.0** | 1 | 0.015 |
| | Aluminium natural | **704.955.1** | 1 | 0.015 |
| | Stainless steel natural | **704.955.9** | 1 | 0.033 |

Mounting dimensions from page 37

## Legend frame

adhesive, Aluminium black

| | Typ-Nr. | Technical drawing | kg |
|---|---|---|---|
| **Legend frame**<br>30 x 50 mm for raised mounting | **704.968.2** | 9 | 0.001 |
| 35 x 57.5 mm for flush mounting | **704.968.3** | 10 | 0.001 |

Technical drawing from page 38

## Legend plate insert

for Legend frame 704.968.2 and 704.968.3

| | Typ-Nr. | kg |
|---|---|---|
| **Legend plate insert**<br>14.5 x 23.5 mm, adhesive, Aluminium black | **704.968.1** | 0.001 |
| 14.5 x 23.5 mm, adhesive, Aluminium natural | **704.968.0** | 0.001 |

## Protective cover, raised mounting

Mounting hole size 22.5 mm dia.

| | Typ-Nr. | Technical drawing | kg |
|---|---|---|---|
| **Protective cover, raised mounting**<br>hinged, transparent, with means for sealing, for Pushbutton | **704.925.0** | 4 | 0.007 |
| hinged, transparent, with means for sealing, for Selector switch | **704.925.2** | 6 | 0.007 |
| hinged, transparent, with means for sealing, with spring fitted, for Pushbutton | **704.925.3** | 4 | 0.007 |

Protection cover 704.925.2 only for selector switches in basic position A applicable.
Technical drawing from page 38

## Protective cover, flush mounting

Mounting hole size 30.5 mm dia.

| | Typ-Nr. | Technical drawing | kg |
|---|---|---|---|
| **Protective cover, flush mounting**<br>hinged, Aluminium natural, with means for sealing, for Pushbutton and Selector switch short lever | **704.928.38** | 8 | 0.019 |
| hinged, Aluminium natural, with means for sealing, spring fitted, for Pushbutton and Selector switch short lever | **704.928.28** | 5 | 0.019 |
| hinged, Aluminium natural, with window, spring fitted, for Pushbutton | **704.928.18** | 7 | 0.019 |

Technical drawing from page 38

## Front protective cap

for Indicator and Illuminated pushbutton for protection IP 68

| | Front protective cap | Typ-Nr. | kg |
|---|---|---|---|
| **Front protective cap**<br>only together with Lenses 704.602.X, 704.601.X and Front rings 704.600.X | Silicone colourless transparent | **704.953.0** | 0.002 |

## Front protective ring

for Illuminated pushbutton with front illumination (IP 67)

| | Front protective ring | Ø 29 mm<br>Typ-Nr. | kg |
|---|---|---|---|
| **Front protective ring**<br>with transparent Pebax membrane,<br>temperature resistance -40 °C ... +85 °C | Aluminium natural | **704.600.5/A** | 0.005 |
| with transparent silicone membrane (extent resistant to sea water),<br>temperature resistance -40 °C ... +85 °C | Aluminium natural | **704.600.3** | 0.005 |
| | Chromed brass | **704.600.2** | 0.005 |

Front protective ring to be mounted with a torque of 40 Ncm onto actuator.

## Front bezel with protective membrane, flush mounting

for Illuminated pushbutton (IP 67)

| | Front bezel | Ø 35 mm<br>Typ-Nr. | kg |
|---|---|---|---|
| **Front bezel with protective membrane, flush mounting**<br>with transparent silicone membrane | Aluminium black | **704.955.4** | 0.015 |
| | Aluminium natural | **704.955.3** | 0.015 |
| with transparent silicone membrane, resistant to sea water | Stainless steel natural | **704.955.9E** | 0.033 |

Front bezel to be mounted with a torque of 40 Ncm onto actuator.

## Blind plug

| | Blind plug | Front protection | Typ-Nr. | Technical drawing | kg |
|---|---|---|---|---|---|
| **Blind plug**<br>Size 28 mm dia., for mounting hole 22.5 mm dia. | Plastic black | IP 65 | **704.960.4** | 3 | 0.004 |
| Size 36 mm dia., for mounting hole 30.5 mm dia. | Plastic black | IP 65 | **704.964.8** | 2 | 0.007 |

Technical drawing from page 38

## Spare key

| | Typ-Nr. | kg |
|---|---|---|
| **Spare key**<br>Standard lock 1001 (KABA) | **14-987.1001** | 0.006 |

Other lock numbers on request

# Backside

## PCB plug-in base

| | Typ-Nr. | Component layout | kg |
|---|---|---|---|
| **PCB plug-in base**<br>16.4 mm dia. x 9.8 mm for Low level switching element, Pins axial | **31-940** | 3 | 0.002 |
| 17.8 x 12.9 mm x 9.8 mm for Snap-action switching element 2.8 mm, Pins axial | **31-942** | 4 | 0.002 |
| 17.9 x 17.9 x 8.4 mm for Low level switching element, Pins bent at right-angle | **31-941** | 1 | 0.004 |

PCB plug-in base Pins right-angle : With the extendable mounting the distance between plug-in base and PCB can be varied up to 3 mm.
Component layout from page 36

## Flat receptacle

| | Typ-Nr. | kg |
|---|---|---|
| **Flat receptacle**<br>2.0 x 0.5 mm for Universal terminal | **31-945** | 0.001 |
| 2.8 x 0.5 mm for Plug-in terminal | **31-946** | 0.001 |

## Insulation sleeve

| | Typ-Nr. | kg |
|---|---|---|
| **Insulation sleeve**<br>Cover Plug-in terminals for snap-action switching element 2.8 mm | **01-928** | 0.001 |
| for Flat receptacle 31-945 | **31-928** | 0.001 |
| for Flat receptacle 31-946 | **31-929** | 0.001 |

## Terminal cover

| | Typ-Nr. | kg |
|---|---|---|
| **Terminal cover** | **01-929** | 0.010 |

# Illumination

## Filament lamp

| | Socket | Operating voltage/-current | Typ-Nr. | kg |
|---|---|---|---|---|
| **Filament lamp** | T5.5 | 12 VAC/DC, 100 mA | **10-1109.1329** | 0.001 |
| | | 12 VAC/DC, 50 mA | **10-1109.1279** | 0.001 |
| | | 24 VAC/DC, 25 mA | **10-1112.1199** | 0.001 |
| | | 24 VAC/DC, 50 mA | **10-1112.1279** | 0.001 |
| | | 28 VAC/DC, 40 mA | **10-1113.1249** | 0.001 |
| | | 30 VAC/DC, 40 mA | **10-1114.1249** | 0.001 |
| | | 36 VAC/DC, 35 mA | **10-1116.1229** | 0.001 |
| | | 48 VAC/DC, 25 mA | **10-1119.1199** | 0.001 |
| | | 6 VAC/DC, 200 mA | **10-1106.1369** | 0.001 |

## Single-LED

| | Socket | Light colour | Operating voltage/-current | Typ-Nr. | kg |
|---|---|---|---|---|---|
| **Single-LED** | T5.5 | blue | 12 VAC/DC, 7/14 mA | **10-2109.1066** | 0.001 |
| | | | 24 VAC/DC, 7/14 mA | **10-2112.1066** | 0.001 |
| | | | 28 VAC/DC, 7/14 mA | **10-2113.1066** | 0.001 |
| | | | 48 VAC/DC, 4/8 mA | **10-2119.1046** | 0.001 |
| | | | 6 VDC, 15 mA | **10-2106.3146** | 0.001 |
| | | green | 12 VAC/DC, 7/14 mA | **10-2109.1065** | 0.001 |
| | | | 24 VAC/DC, 7/14 mA | **10-2112.1065** | 0.001 |
| | | | 28 VAC/DC, 7/14 mA | **10-2113.1065** | 0.001 |
| | | | 48 VAC/DC, 4/8 mA | **10-2119.1045** | 0.001 |
| | | | 6 VDC, 15 mA | **10-2106.3145** | 0.001 |
| | | red | 12 VAC/DC, 7/14 mA | **10-2109.1062** | 0.001 |
| | | | 24 VAC/DC, 7/14 mA | **10-2112.1062** | 0.001 |
| | | | 28 VAC/DC, 7/14 mA | **10-2113.1062** | 0.001 |
| | | | 48 VAC/DC, 4/8 mA | **10-2119.1042** | 0.001 |
| | | | 6 VDC, 15 mA | **10-2106.3142** | 0.001 |
| | | white diffuse | 12 VAC/DC, 7/14 mA | **10-2109.1069** | 0.001 |
| | | | 24 VAC/DC, 7/14 mA | **10-2112.1069** | 0.001 |
| | | | 28 VAC/DC, 7/14 mA | **10-2113.1069** | 0.001 |
| | | | 48 VAC/DC, 4/8 mA | **10-2119.1049** | 0.001 |
| | | | 6 VDC, 15 mA | **10-2106.3149** | 0.001 |
| | | yellow | 12 VAC/DC, 7/14 mA | **10-2109.1064** | 0.001 |
| | | | 24 VAC/DC, 7/14 mA | **10-2112.1064** | 0.001 |
| | | | 28 VAC/DC, 7/14 mA | **10-2113.1064** | 0.001 |
| | | | 48 VAC/DC, 4/8 mA | **10-2119.1044** | 0.001 |
| | | | 6 VDC, 15 mA | **10-2106.3144** | 0.001 |

Note:
AC operation through halve-wave rectifier possible, slight flickering can occure.

## Terminal plate empty

for fitting with series resistors

| | Typ-Nr. | kg |
|---|---|---|
| **Terminal plate empty**<br>10 spaces 125 x 60 x 15 mm | **02-912.2** | 0.045 |
| 15 spaces 187.5 x 60 x 15 mm | **02-912.3** | 0.090 |
| 20 spaces 250 x 60 x 15 mm | **02-912.4** | 0.095 |
| 5 spaces 62.5 x 60 x 15 mm | **02-912.1** | 0.025 |

## Assembling

### Positioning insert

| | Typ-Nr. | Mounting dimensions | kg |
|---|---|---|---|
| **Positioning insert** | **14-910** | 3 | 0.001 |

Mounting dimensions from page 37

### Anti-twist ring, flush mounting

| | Typ-Nr. | kg |
|---|---|---|
| **Anti-twist ring, flush mounting** | **704.954.0** | 0.002 |

### Reducing ring

Devices 22.5 mm dia. in mounting hole size 30.5 mm dia.

| | Typ-Nr. | kg |
|---|---|---|
| **Reducing ring**<br>Aluminium black | **704.960.0** | 0.004 |
| Aluminium natural | **704.960.8** | 0.004 |

You need to install two reduction rings.

### Lens plug for round lens, flush mounting

| | Typ-Nr. | kg |
|---|---|---|
| **Lens plug for round lens, flush mounting**<br>for mounting and dismantling of Lens round, flush mounting | **700.006.0** | 0.003 |

### Lamp remover

| | Typ-Nr. | kg |
|---|---|---|
| **Lamp remover** | **02-906** | 0.002 |

CAUTION
A switching process might be released when replacing the Lamp/LED !

## Enclosure

Grey similar RAL 7035; cover lead-sealable

| | Dimension | Typ-Nr. | Technical drawing | kg |
|---|---|---|---|---|
| **Enclosure**<br>with mounting hole 1 x 22.5 mm dia., with anti-twist device | L 94 mm, W 94 mm, H 81 mm | **704.945.1** | 11 | 0.211 |
| with mounting hole 2 x 22.5 mm dia., with anti-twist device | L 130 mm, W 94 mm, H 81 mm | **704.945.2** | 12 | 0.251 |
| with mounting hole 3 x 22.5 mm dia., with anti-twist device | L 180 mm, W 94 mm, H 81 mm | **704.945.3** | 13 | 0.313 |
| with mounting hole 4 x 22.5 mm dia., with anti-twist device | L 180 mm, W 182 mm, H 110 mm | **704.945.4** | 14 | 0.572 |
| with mounting hole 6 x 22.5 mm dia., with anti-twist device | L 180 mm, W 182 mm, H 110 mm | **704.945.5** | 15 | 0.568 |

Openings for cable gland M16 or M20.
Protection class IP 66.
Technical drawing from page 38

## Cable gland

| | Typ-Nr. | kg |
|---|---|---|
| **Cable gland**<br>M16, Plastic grey | **61-9481.6** | 0.007 |
| M20, Plastic grey | **704.945.6** | 0.011 |

with traction relief; protection degree IP 68.

## Actuator with snap-action switching element

### Switching system

Self-cleaning, double-break, snap action switching system (with contact gap 2 x 0.5 mm).
1 normally closed or 1 normally open contact per element.
Snap-action switching elements with soldering terminals at the sides: up to 4 switching element can be on a pushbutton (max. 4 normally closed and 4 normally open contacts).
Snap-action switching element with axial plug-in terminals 2.8 mm stackable, only 1 switching element can be on a pushbutton.

### Material

**Material of contact**
Gold plated silver

**Switch housing**
Plug-in-/soldering terminal
Diallylphthalate DAP, Polyamide 66, Polysulfone, heat-resistant and self-extinguishing
Soldering terminal: PA 6.6 Ultramide

**Actuator housing**
Polyamide

### Mechanical characteristics

**Terminals**
Snap-action switching element with tinned soldering terminals at the sides:
Max. wire diameter 2 wires à 1.2 mm
max. wire cross-section of stranded cable 1x 1 mm²

Snap-action switching element with axial plug-in terminals, which can also be used as soldering terminals: Plug-in terminal 2.8 x 0.5 mm

Soldering terminal:
Max. wire diameter 2 wires of 1 mm
Max. wire cross-section of stranded cable 2 x 0.75 mm² or 1 x 1.0 mm²

**Actuating torque**
Measured at the key or lever of the keylock- or selector switch 2.5 Ncm ... 5.5 Ncm, depending on the number of switching elements

**Actuating force**
Maintain 5 N ... 7.8 N
Momentary 3.2 N ... 6 N
depending on the number of switching elements

**Actuating travel**

| | |
|---|---|
| Illuminated pushbutton: | 3 mm |
| Switch actuator 2 positions: | |
| Momentary action | 1 x ca. 42° deflection momentary action |
| Maintained action | 1 x ca. 90° deflection maintained action |

**Rebound time**
≤5ms

**Mechanical lifetime**

| | | |
|---|---|---|
| Momentary action | 2 million | Cycles of operation |
| Maintained action | 1 million | Cycles of operation |

### Electrical characteristics

**Standards**
The devices comply with : EN IEC 61058-1

**Rated voltage**
250 VAC/DC as per EN IEC 61058-1-15

**Contact resistance**
New state ≤50 mΩ as per DIN IEC 60512-2-4

**Electrostatic discharge (ESD)**
Keylock switch 15 kV

**Rated current**
5 A

**Conventional free air thermal current $I_{th}$**
5 A
The maximum current in continuous operation and at ambient temperature not exceeding the quoted maximum values.

**Switch rating**
250 VAC, 5 A (cosϕ 1)
250 VAC, 3 A (cosϕ 0,3)

Switch rating AC (cosϕ 0,7)

| Voltage | 125 VAC | 250 VAC |
|---|---|---|
| Current | 3 A | 2 A |

Switch rating DC (inductive) L:R = 30 ms

| Voltage | 24 VDC | 60 VDC | 110 VDC | 220 VDC |
|---|---|---|---|---|
| Current | 2 A | 0.7 A | 0.2 A | 0.1 A |

**Electric strength**
3000 VAC, 50 Hz, 1 min. between all terminals and earth, as per EN IEC 61058-1-15

**Isolation resistance**
>7 MΩ between the opend contats at 500 VDC, as per EN IEC 61058-1-15 (reinforced insulation)

**Protection class**
II

### Environmental conditions

**Storage temperature**
-40 °C ... +85 °C

**Service temperature**
-25 °C ... +55 °C
For indicators and illuminated pushbuttons mounted as a block, make sure the heat can escape freely.

**Protection degree**
as per EN IEC 60529
front side IP 67

**Shock resistance**
(semi-sinusoidal)
max. 150 m/s², pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27

**Vibration resistance**
(sinusoidal)
max. 100 m/s² at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

**Climate resistance**
Damp heat state as per EN IEC 60068-2-30
Damp heat cyclic as per EN IEC 60068-2-78

## Approvals

**Approbations**
CB (IEC 61058)
CSA
ENEC (EN 61058)
Germanischer Lloyd
UL

**Declaration of conformity**
CE

## Actuator with low level switching element

### Switching system

This low level switching element was designed for switching low powers in electronic circuits. The mechanism assures reliable switching of loads ranging from a few µA/µV up to 100 mA/42 VAC/DC.
Single-break momentary contact, as normally open or normally closed with 4 independent points of contact. 2 momentary contacts per switching element; combination of normally open and normally closed is possible.
Special features are the long life, extremely short rebound time and stable contact resistance.

### Material

**Material of contact**
Gold plated

**Switch housing**
Polysulfone, heat-resistant and self-extinguishing

**Actuator housing**
Polyamide

### Mechanical characteristics

**Terminals**
The universal terminals permit these units to be mounted on printed circuit boards (PCB). These terminals can also be used as soldering or plug-in terminals.
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.
Soldering terminal:
Max. wire diameter 2 wires of 1 mm
Max. wire cross-section of stranded cable 2 x 0.75 mm²
Plug-in terminal: 2.0 x 0.5 mm.

**Actuating torque**
Measured at the key or lever of the keylock- or selector switch
2.5 Ncm ... 5.5 Ncm, depending on the number of switching elements

**Actuating force**
3 ... 4 N, depending on the number of switching elements

**Actuating travel**

Illuminated pushbutton : 3 mm
Switch actuator 2 positions:
Momentary action 1 x ca. 42° deflection momentary action
Maintained action 1 x ca. 90° deflection maintained action

**Rebound time**
typical <100 µs

**Mechanical lifetime**
Momentary action 5 million cycles of operation
Maintained action 1 million cycles of operation

### Electrical characteristics

**Contact resistance**
New state ≤50 mΩ as per DIN IEC 60512-2-4

**Electrostatic discharge (ESD)**
Keylock switch 15 kV

**Switch rating**
10 µA, 100 µV to 100 mA at 42 VAC/VDC

**Electric strength**
3000 VAC, 50 Hz, 1 min. between all terminals and earth, as per EN IEC 61058-1-15

**Protection class**
II

### Environmental conditions

**Storage temperature**
-40 °C ... +85 °C

**Service temperature**
-25 °C ... +55 °C
For indicators and illuminated pushbuttons mounted as a block, make sure the heat can escape freely.

**Protection degree**
as per EN IEC 60529
front side IP 67

**Shock resistance**
(semi-sinusoidal)
max. 150 m/s², pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27

## Buzzer

### Buzzer system

**System**
Piezo disc

### Material

**Alarm buzzer case**
Polyamide

**Front cap**
Plastic Polyamide
Metal Nickel-plated brass (sea-water proof)

### Mechanical characteristics

**Terminals**
Plug-in terminal 2.8 x 0.5 mm

### Electrical characteristics

**Frequency (tone)**
approx. 2.8 kHz continuous tone only

**Sound pressure**
95 db (A) ±8 dB at a distance of 0.1 m

**Operation Voltage/Current**

| | |
|---|---|
| Operation Voltage | 24 VDC ±10 % |
| Operation Current | ≤25 mA |

## Environmental conditions

**Storage temperature**
-40 °C ... +85 °C

**Operating temperature**
-25 °C ... +55 °C

**Protection degree**
as per EN IEC 60529, frontside
IP 40, devices flush mounting
IP 65, devices raised mounting

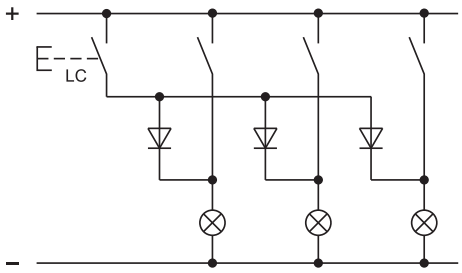
## Approvals

**Declaration of conformity**
CE

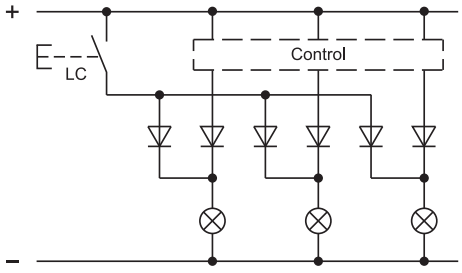
## Diode element

When indicators and illuminated pushbuttons equipped with diodes, the user is able to perform a lamp check or wire an alarm circuit simply with a considerable saving of space.

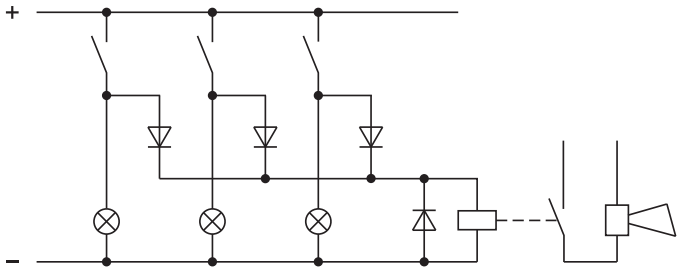
Lamp check



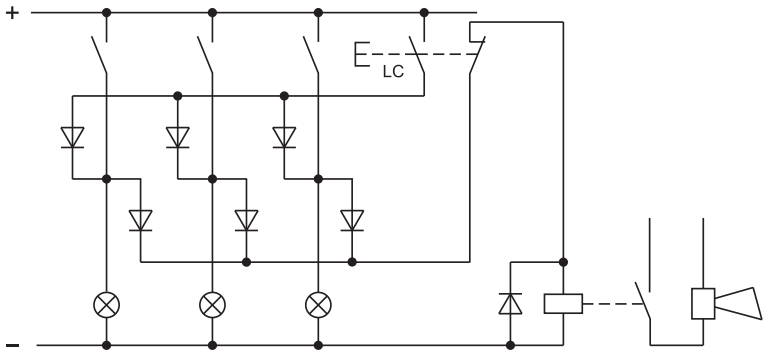

Lamp check with blocking diodes



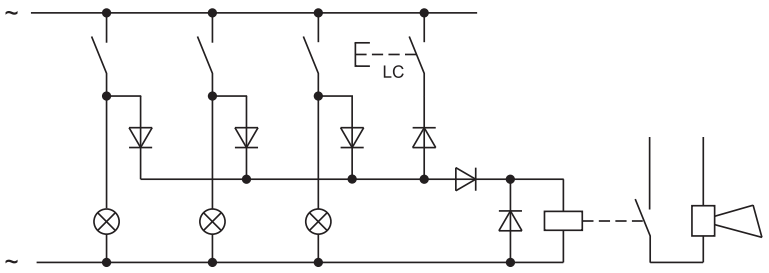

Alarm circuit from fault annunciation system




Lamp check and alarm circuit




Lamp check and alarm circuit with only one diode and AC voltage




LC = Lamp Check

## Suppressor circuits

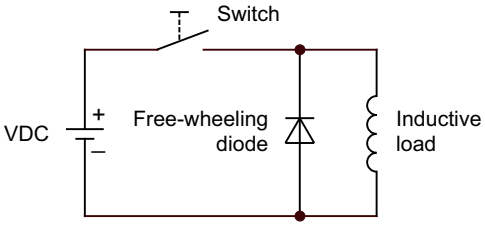
When switching inductive loads such as relays, DC motors, and DC solenoids, it is always important to absorb surges (e.g. with a diode) to protect the contacts. When these inductive loads are switched off, a counter emf can severely damage switch contacts and greatly shorten lifetime.

Fig. 1 shows an inductive load with a free-wheeling diode connected in parallel. This free-wheeling diode provides a path for the inductor current to flow when the current is interrupted by the switch. Without this free-wheeling diode, the voltage across the coil will be limited only by dielectric breakdown voltages of the circuit or parasitic elements of the coil. This voltage can be kilovolts in amplitude even when nominal circuit voltages are low (e.g. 12 VDC) see Fig. 2.

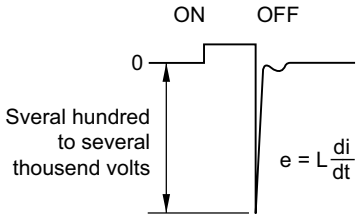
The free-wheeling diode should be chosen so that the reverse breakdown voltage is greater than the voltage driving the inductive load. The DC blocking voltage (VR) of the free-wheeling diode can be found in the datasheet of a diode. The forward current should be equal or greater than the maximum current flowing through the load.

**To get an efficient protection, the free-wheeling diode must be connected as close as possible to the inductive load!**

Switching with inductive load
Fig. 1




Counter emf
over load without free-wheeling diode
Fig. 2



## General notes

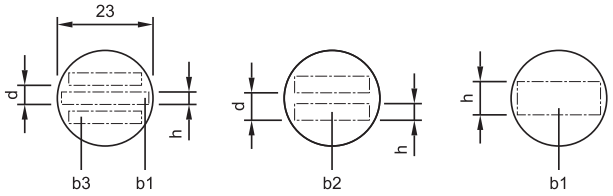
**1. Engraving**
In addition to the most commonly used world languages, in DIN 1451-3 close spacing, other typefaces are available as Scandinavian, Slavic, Greek, Russian and Polish.
The lenses are filled with black or white colour.
Standard height of letters is 3 mm. If the height is not specified, we will supply 3 mm engraved letters.

**2. Hot stamping**
Standard legends and ISO symbols are hot stamped. For larger series it is worth considering markings by means of hot stamping. We will pleased to advise you.

## Engraving marking cap for Indicator round, full face illumination

All dimensions in mm

| Height of letters | Number of lines | Number of (target value) letters per line | | | Line spacing |
|---|---|---|---|---|---|
| h | | b1 | b2 | b3 | d |
| 3 | 3 | 11 | 10 | 9 | 4.6 |
| 4 | 2 | 8 | 7 | - | 6.6 |
| 8 | 1 | 4 | - | - | - |

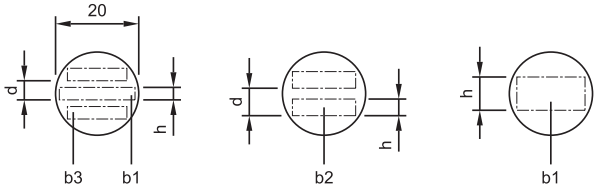



The gap between 2 words results in each case a letter less.

## Engraving marking cap for Indicator and illuminated Pushbutton round, front illumination

All dimensions in mm

| Height of letters | Number of lines | Number of (target value) letters per line | | | Line spacing |
|---|---|---|---|---|---|
| h | | b1 | b2 | b3 | d |
| 3 | 3 | 9 | 9 | 7 | 4.6 |
| 4 | 2 | 7 | 6 | - | 6.6 |
| 8 | 1 | 3 | - | - | - |



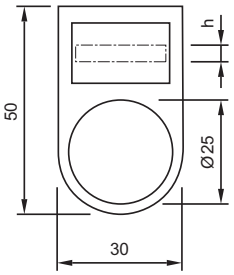

The gap between 2 words results in each case a letter less.

## Engraving legend plates

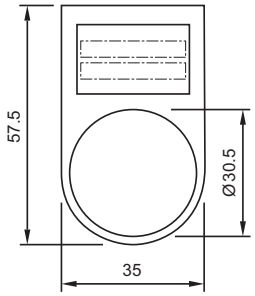
All dimensions in mm

| Dimension | Devices mounting style | Height of letters h | Number of lines | Number of (target value) letters per line | Image |
|---|---|---|---|---|---|
| 30 x 50 | round, raised | 3 | 2 | 12 | B1 |
| | | 4 | 1 | 7 | B1 |
| | | 8 | 1 | 4 | B1 |
| 35 x 57.5 | round, flush | 3 | 2 | 12 | B2 |
| | | 4 | 1 | 7 | B2 |
| | | 8 | 1 | 4 | B2 |

B1



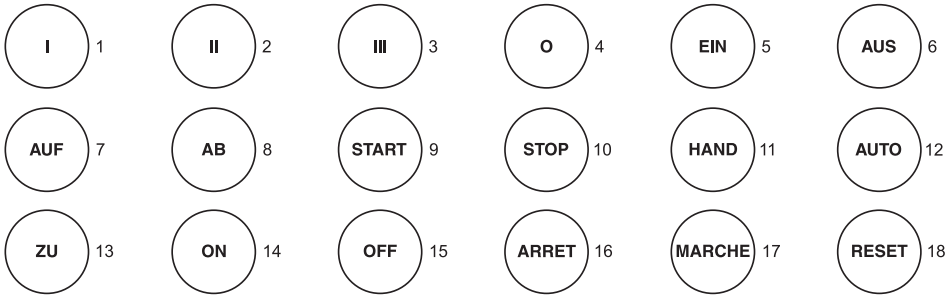

B2



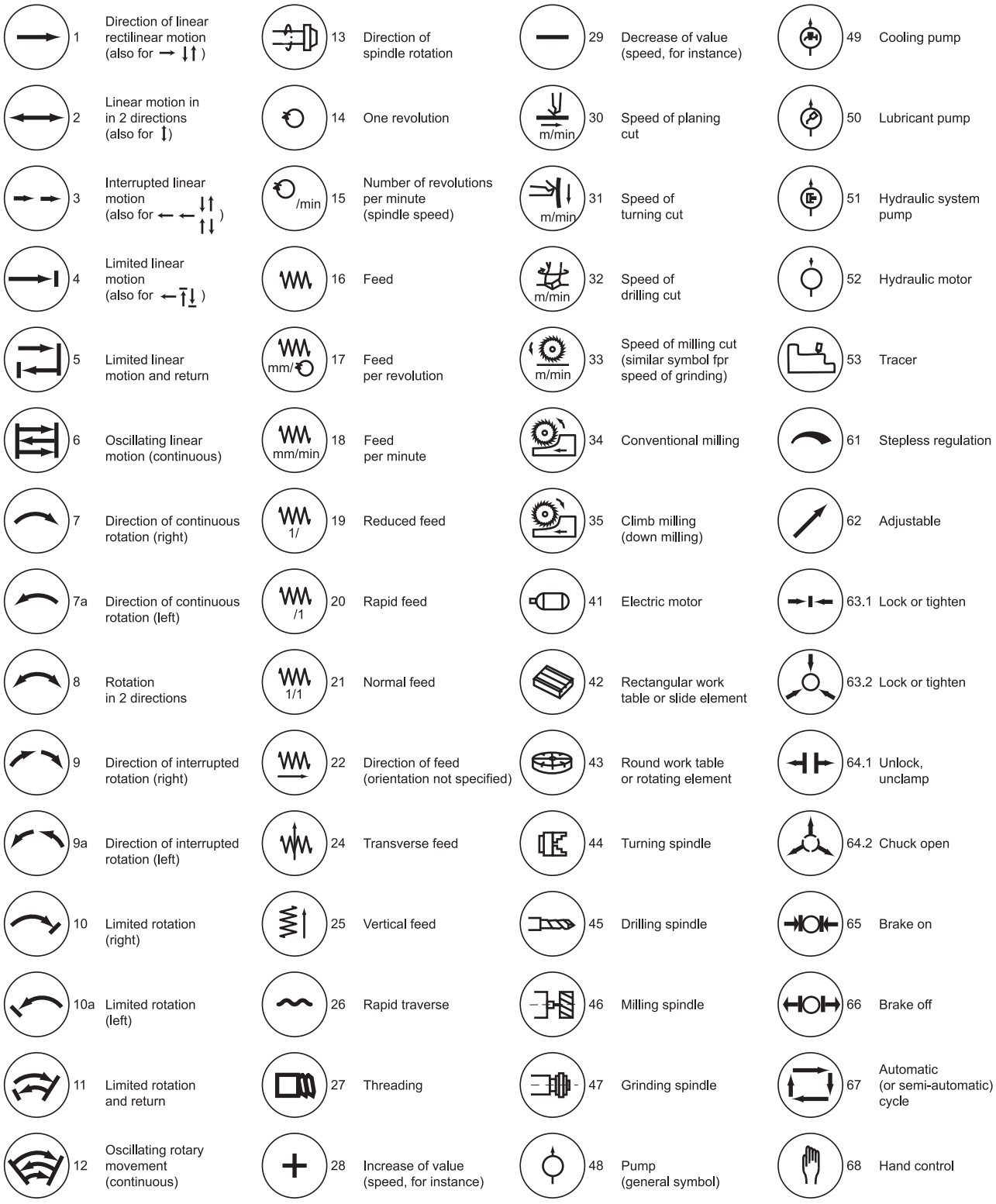

The gap between 2 words results in each case a letter less.

## Standard texts for marking plates and marking caps for Indicator and Illuminated Pushbutton

Height of letters 6 mm



## Symbols for marking plates and marking caps for Indicator and Illuminated Pushbutton




Continuation see next page

Continued from previous page

69 Start, on

70 Stop, off

71 Start and stop with same button

72 In action as long as button is operated

74 Engaging (mechanical start)

75 Disengaging (mechanical stop)

76 Close lock-nut

77 Open lock-nut

78 Engage sensor

79 Disengage sensor

80 Change speed only in stopped position

81 Change speed only in motion

91 Shear pin construction

92 Danger (high voltage)

93 Caution!

94 Main switch

101 Coolant fluid

102 Machine lighting

103 Weight

104 Filter opening

105 Overflow

106 Drain

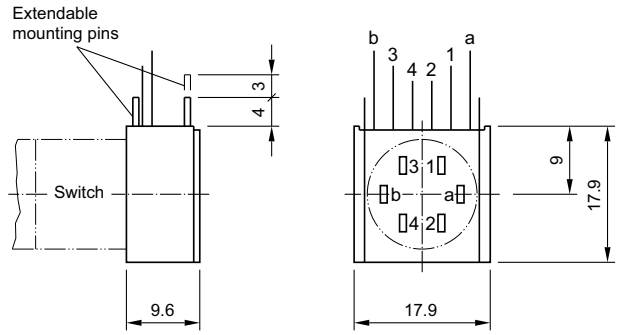
107 Oil, lubricant

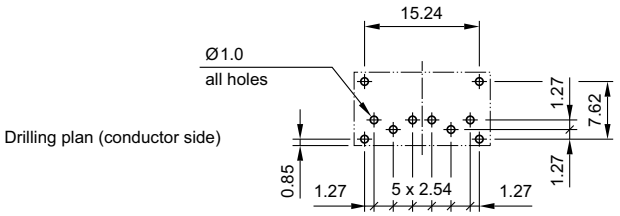
108 Blast

109 Suction

## Component layout

**1 PCB plug-in base** page 22

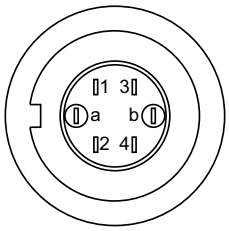


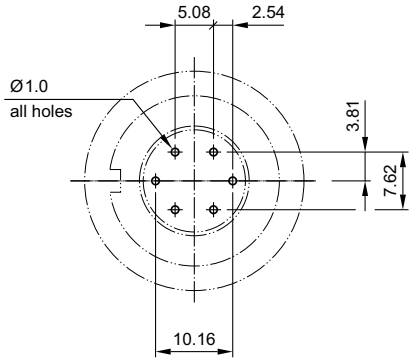

Drilling plan (conductor side)

**2 Indicator actuator full face illumination** page 6 **| Indicator actuator front illumination** page 6 **| Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Keylock switch 2 positions** page 11 **| Selector switch 2 positions** page 12 **| Indicator actuator, flush mounting** page 13 **| Illuminated pushbutton actuator, flush mounting** page 14 **| Keylock switch actuator 2 positions, flush mounting** page 15 **| Selector switch actuator 2 positions, flush mounting** page 16

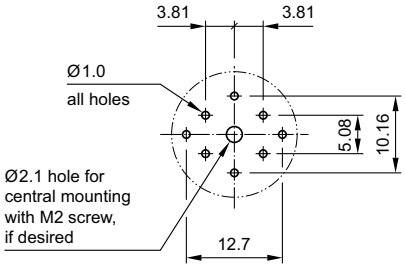
Terminals (rearside)



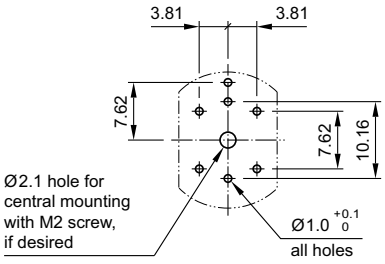

PCB layout (conductor side)




**3 PCB plug-in base** page 22

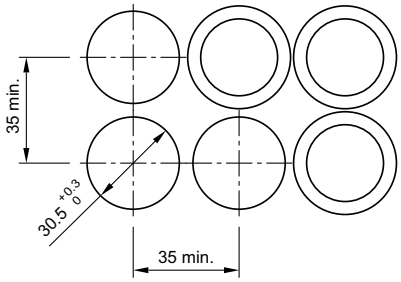


**4 PCB plug-in base** page 22



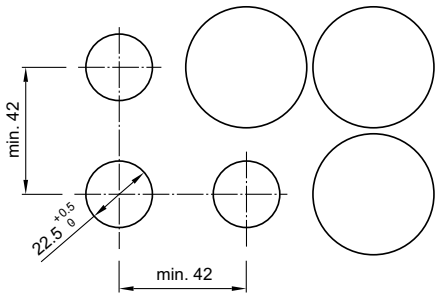

## Mounting dimensions

**1 Indicator actuator, flush mounting** page 13 **| Buzzer, flush mounting** page 13 **| Illuminated pushbutton actuator, flush mounting** page 14 **| Keylock switch actuator 2 positions, flush mounting** page 15 **| Selector switch actuator 2 positions, flush mounting** page 16 **| Front bezel set, flush mounting** page 20

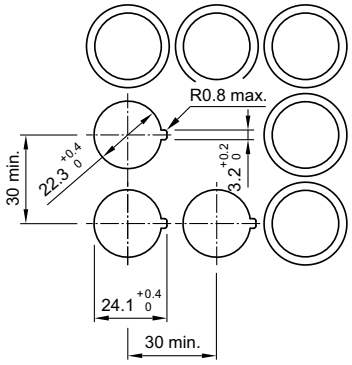



Hole spacing 37 mm min. by using blind plug 704.960.8

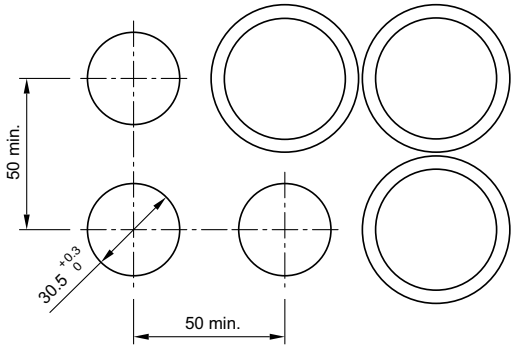
**2 Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10




**3 Positioning insert** page 25

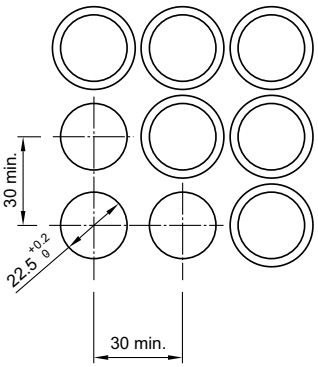


**4 Front bezel set for Mushroom-head pushbutton** page 19

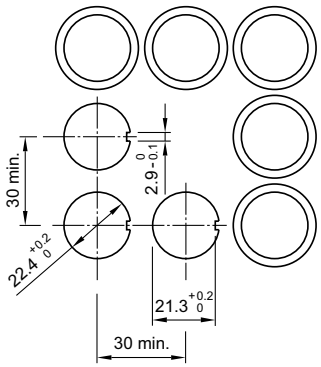



**5 Indicator actuator full face illumination** page 6 **| Indicator actuator front illumination** page 6 **| Buzzer** page 7 **| Illuminated actuator pushbutton** page 8 **| Keylock switch 2 positions** page 11 **| Selector switch 2 positions** page 12

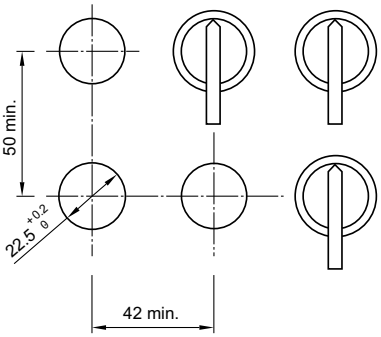
for devices
without anti-twist device




for devices
with anti-twist device (rotary)
(recommended for keylock switch)



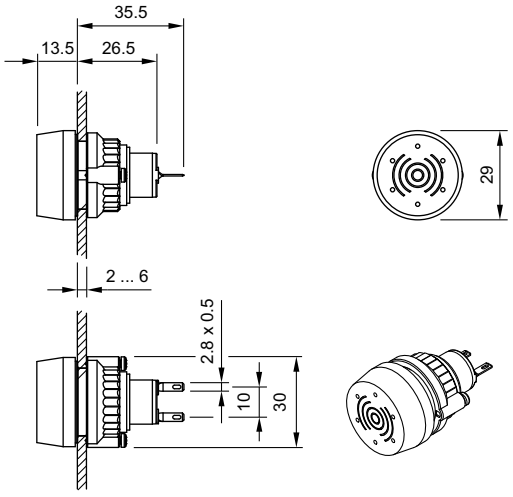

for devices
selector switch long lever



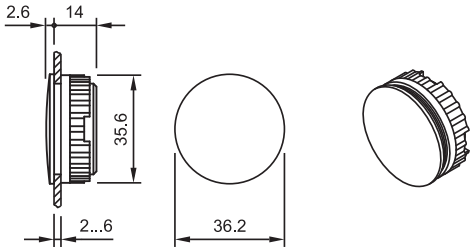

Hole spacing 31 mm min. by using blind plug 704.960.4

## Technical drawing

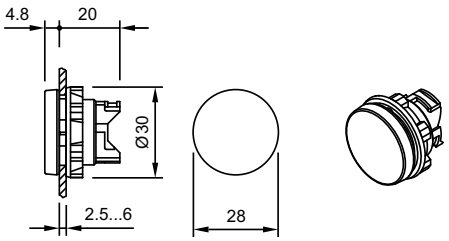
**1 Buzzer** page 7



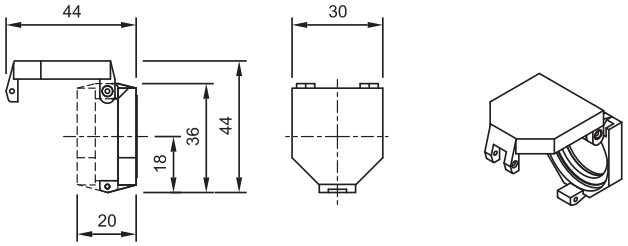
**2 Blind plug** page 22




**3 Blind plug** page 22

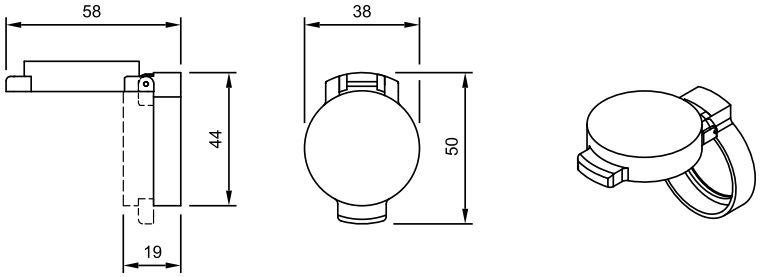



**4 Protective cover, raised mounting** page 20



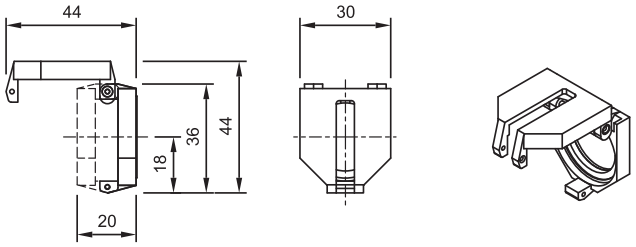

Front panel thickness reduces by 3.5 mm to max. 4.5 mm

**5 Protective cover, flush mounting** page 21



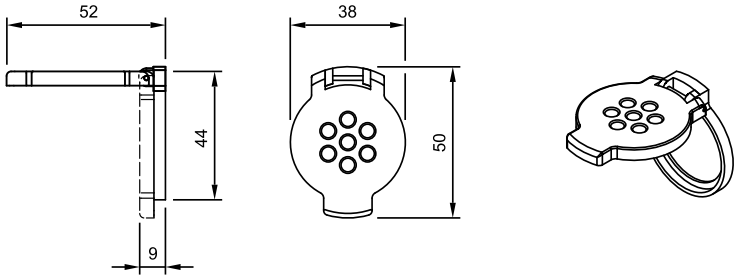

Front panel thickness reduces by 2.5 mm to max. 3.5 mm

**6 Protective cover, raised mounting** page 20



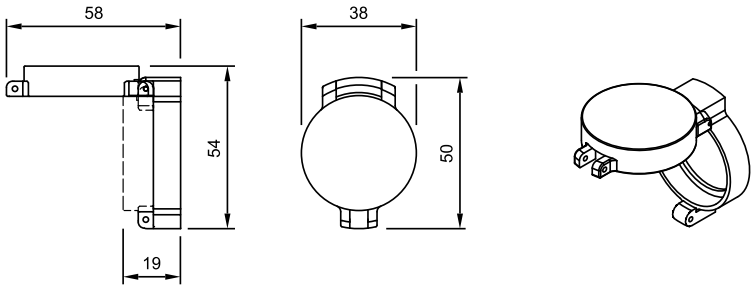

Front panel thickness reduces by 3.5 mm to max. 4.5 mm

**7 Protective cover, flush mounting** page 21



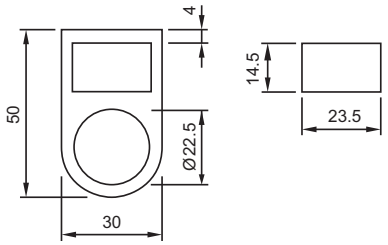

Front panel thickness reduces by 2.5 mm to max. 3.5 mm

**8 Protective cover, flush mounting** page 21

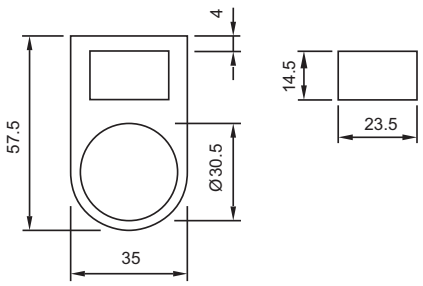



Front panel thickness reduces by 2.5 mm to max. 3.5 mm

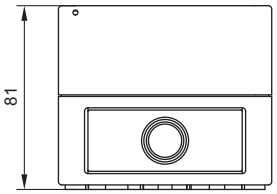
**9 Legend frame** page 20

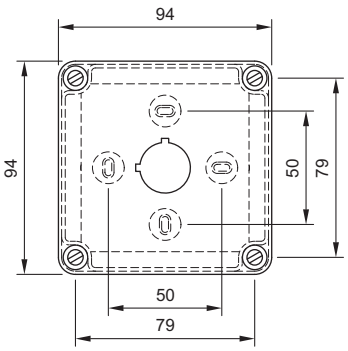


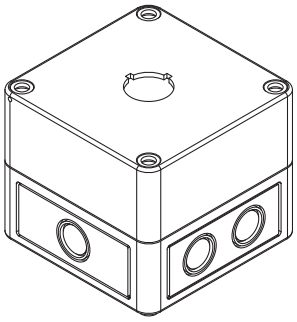

**10 Legend frame** page 20



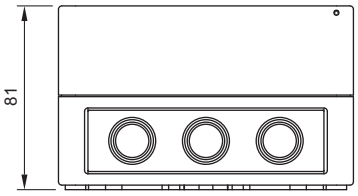
**11 Enclosure** page 26

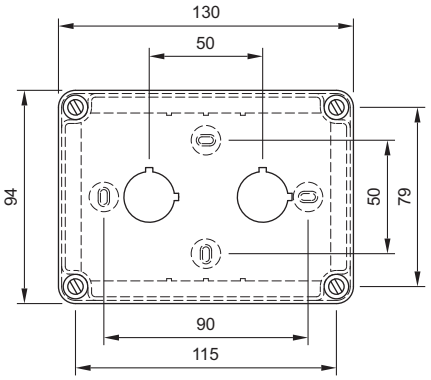


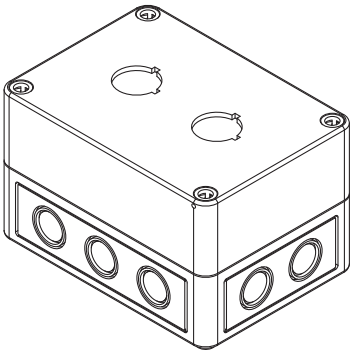



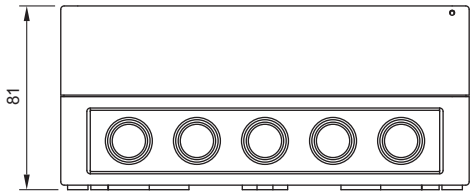
**12 Enclosure** page 26

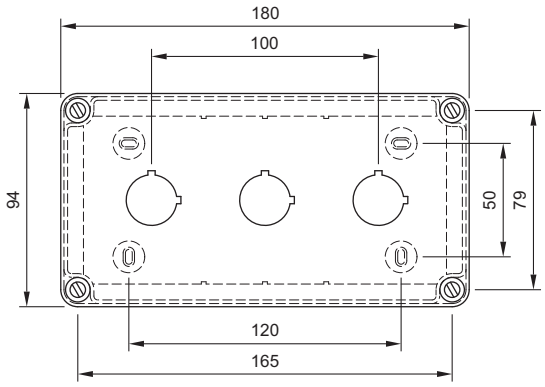


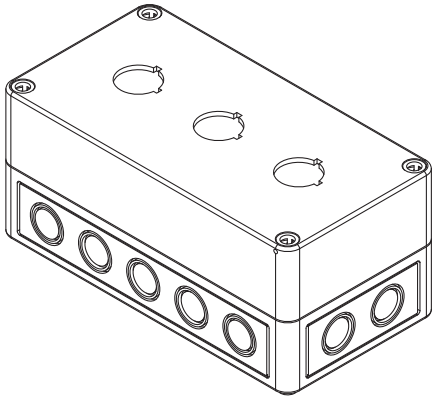



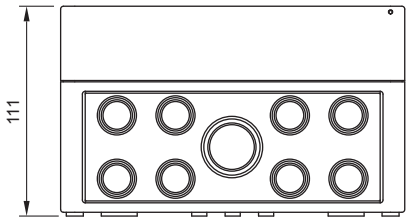
**13 Enclosure** page 26

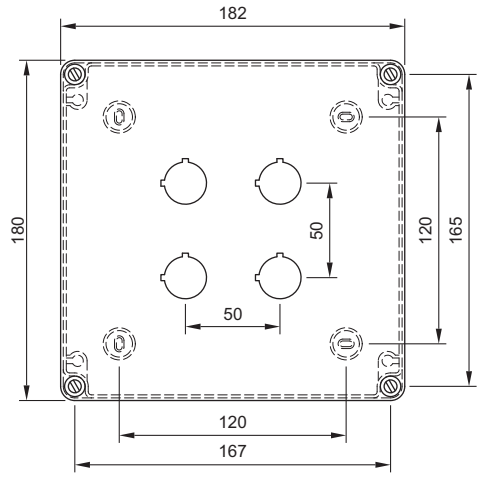


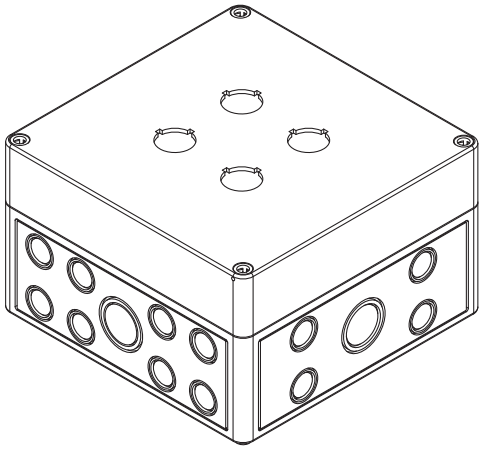



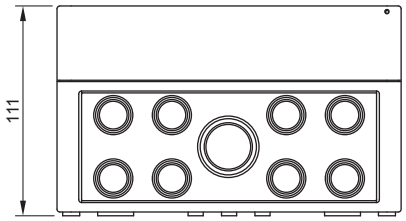
**14 Enclosure** page 26

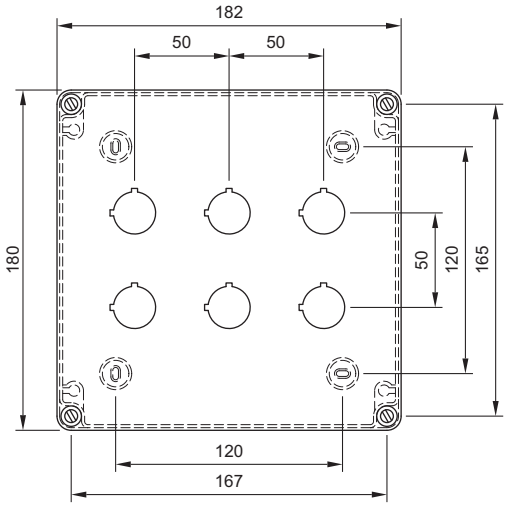


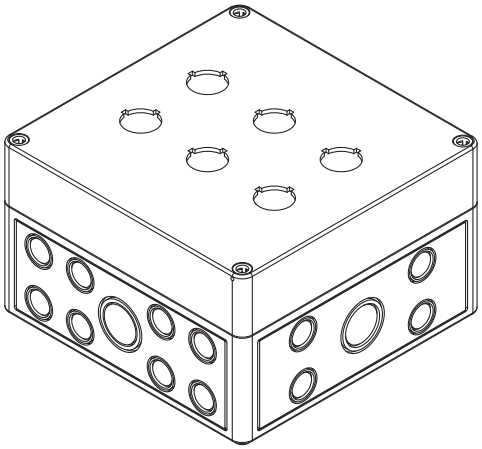



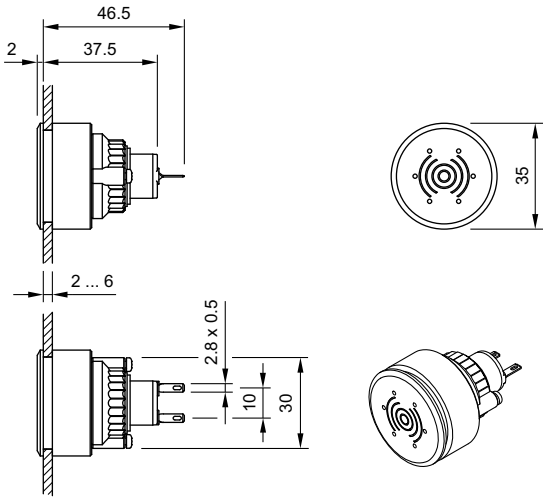
**15 Enclosure** page 26



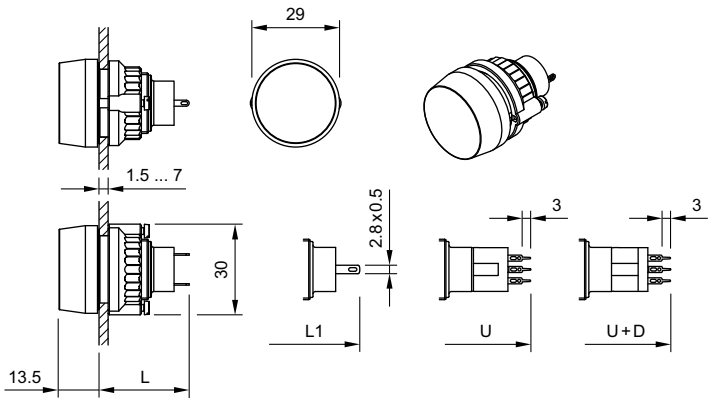



**16 Buzzer, flush mounting** page 13

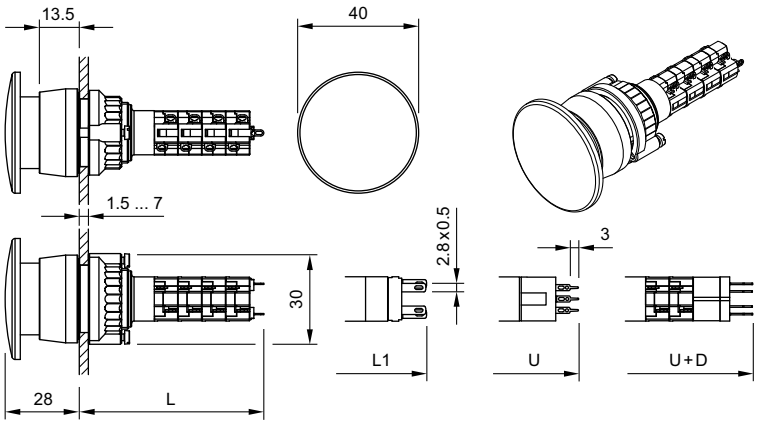


**17 Indicator actuator full face illumination** page 6



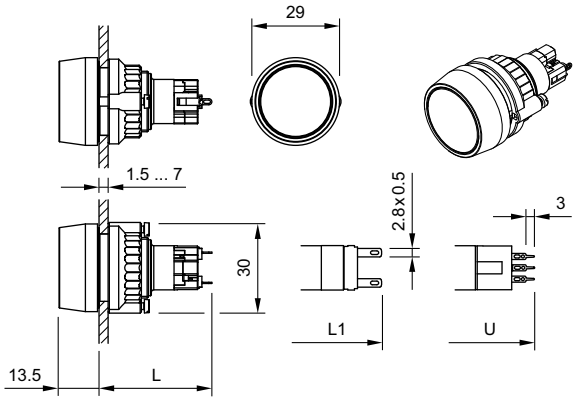

| Soldering terminal | Soldering terminal (also pluggable) | Universal terminal | Universal terminal + diodes |
|---|---|---|---|
| L | L1 | U | U+D |
| 30 | 33 | 44.5 | - |
| 1D, 2D | | | 44.5 |

**18 Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10



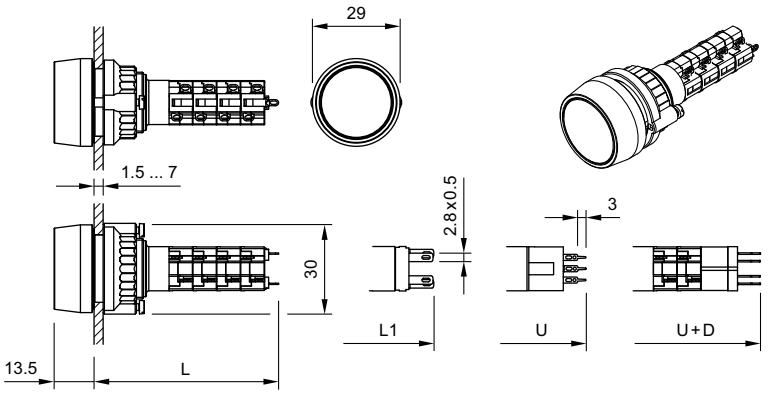

| | Soldering terminal | Soldering terminal (also pluggable) | Universal terminal | Universal terminal + diode |
|---|---|---|---|---|
| | L | L1 | U | U+D |
| 1NC+1NO | 37.5 | 45.5 | - | - |
| 2NC+2NO | 45 | - | - | - |
| 3NC+3NO | 52.5 | - | - | - |
| 4NC+4NO | 60 | - | - | - |
| 1NC+1NO+D | - | - | - | 52 |
| 2NC+2NO+D | - | - | - | 60 |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 44.5 | - |

**19 Indicator actuator front illumination** page 6



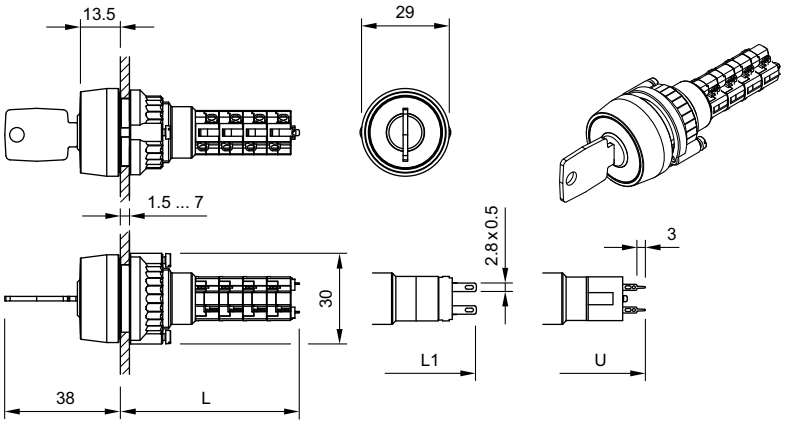

| Soldering terminal | Soldering terminal (also pluggable) | Unversal terminal |
|---|---|---|
| L | L1 | U |
| 37.5 | 45.5 | 44.5 |

**20 Illuminated actuator pushbutton** page 8



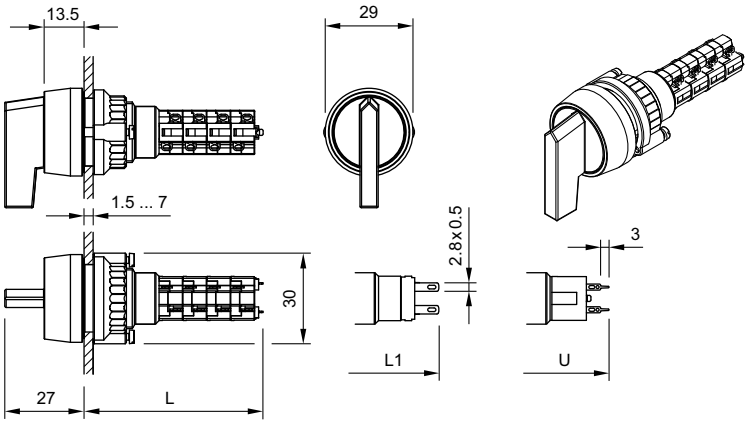

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U | Universal terminal + diode U+D |
|---|---|---|---|---|
| 1NC+1NO | 37.5 | 45.5 | - | - |
| 2NC+2NO | 45 | - | - | - |
| 3NC+3NO | 52.5 | - | - | - |
| 4NC+4NO | 60 | - | - | - |
| 1NC+1NO+D | - | - | - | 52 |
| 2NC+2NO+D | - | - | - | 60 |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 44.5 | - |

**21 Keylock switch 2 positions** page 11



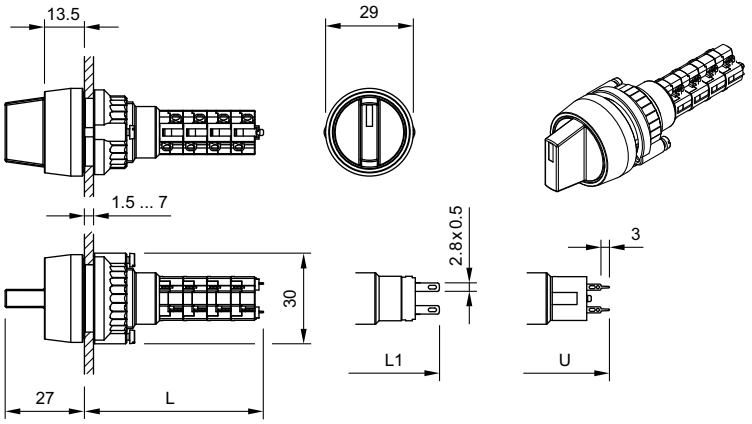

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Unversal terminal U |
|---|---|---|---|
| 1NC+1NO | 35.5 | 45.5 | |
| 2NC+2NO | 43 | - | - |
| 3NC+3NO | 50.5 | - | - |
| 4NC+4NO | 58 | - | - |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 44.5 |

**22 Selector switch 2 positions** page 12



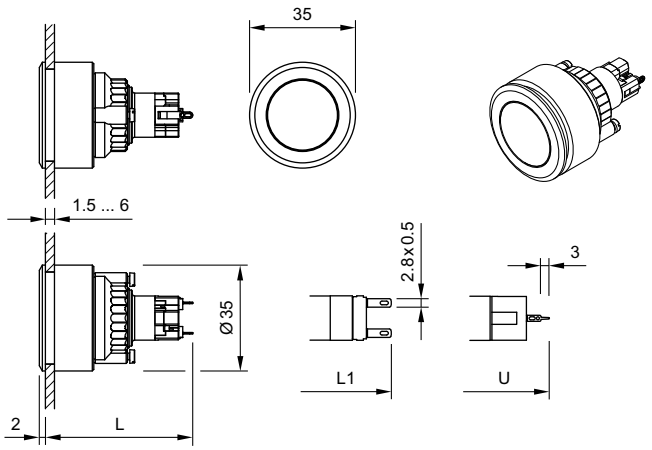

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Unversal terminal U |
|---|---|---|---|
| 1NC+1NO | 35.5 | 45.5 | - |
| 2NC+2NO | 43 | - | - |
| 3NC+3NO | 50.5 | - | - |
| 4NC+4NO | 58 | - | - |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 44.5 |

**23 Selector switch 2 positions** page 12



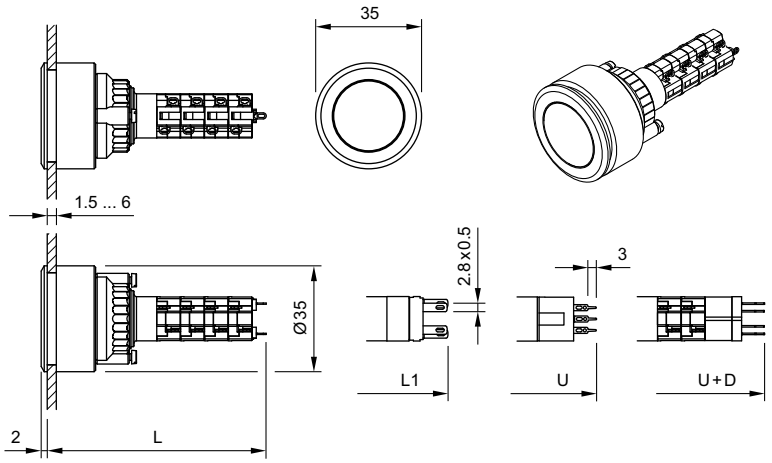

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U |
|---|---|---|---|
| 1NC+1NO | 35.5 | 45.5 | |
| 2NC+2NO | 43 | - | - |
| 3NC+3NO | 50.5 | - | - |
| 4NC+4NO | 58 | - | - |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 44.5 |

**24 Indicator actuator, flush mounting** page 13



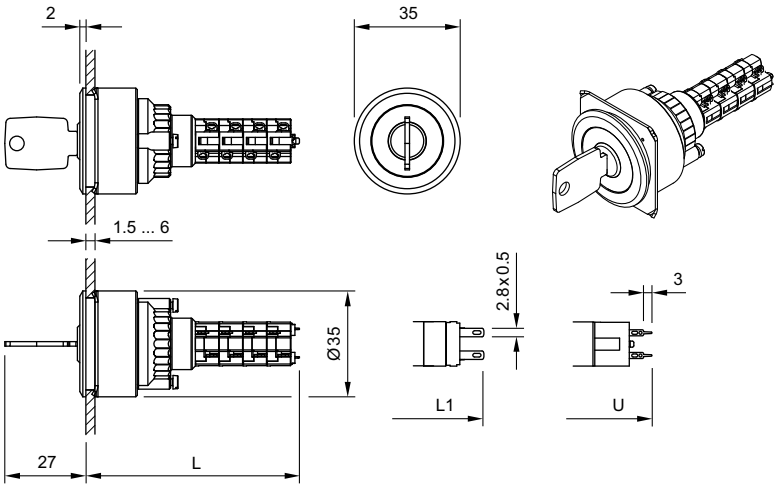

| Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U |
|---|---|---|
| 48.5 | 56.5 | 55.5 |

**25 Illuminated pushbutton actuator, flush mounting** page 14



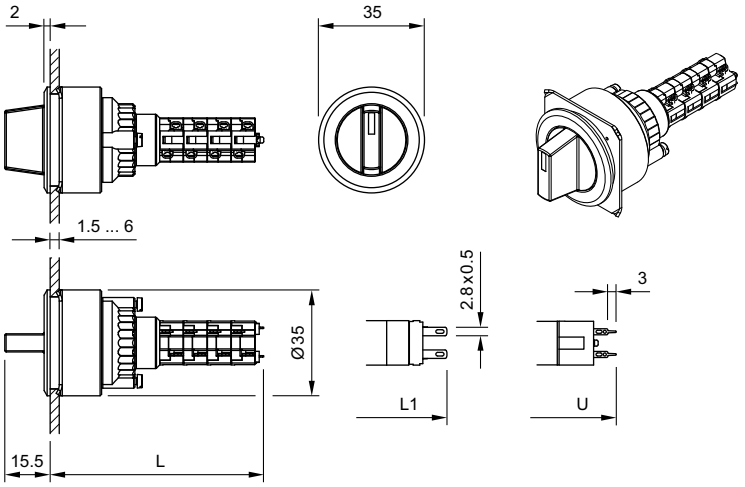

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U | Universal terminal + diode U+D |
|---|---|---|---|---|
| 1NC+1NO | 48.5 | 56 | - | - |
| 2NC+2NO | 56 | - | - | - |
| 3NC+3NO | 63.5 | - | - | - |
| 4NC+4NO | 71 | - | - | - |
| 1NC+1NO+D | - | - | - | 63.5 |
| 2NC+2NO+D | - | - | - | 71 |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 55,5 | - |

**26 Keylock switch actuator 2 positions, flush mounting** page 15



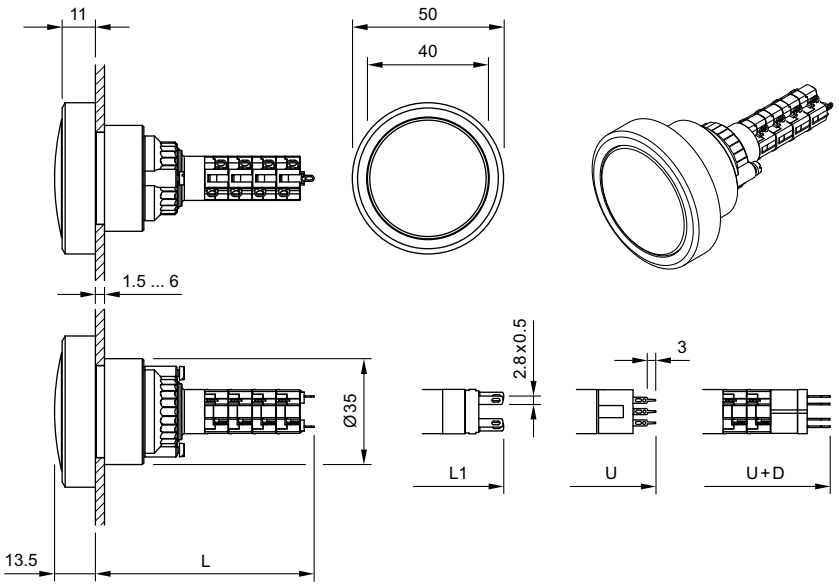

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U |
|---|---|---|---|
| 1NC+1NO | 46.5 | 56 | - |
| 2NC+2NO | 54 | - | - |
| 3NC+3NO | 61.5 | - | - |
| 4NC+4NO | 69 | - | - |
| 1NC+1NO, 2NO | | | 55.5 |

**27 Selector switch actuator 2 positions, flush mounting** page 16




| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U |
|---|---|---|---|
| 1NC+1NO | 46.5 | 56 | |
| 2NC+2NO | 54 | - | - |
| 3NC+3NO | 61.5 | - | - |
| 4NC+4NO | 69 | - | - |
| 1NC+1NO, 2NC, 2NO | | | 55.5 |

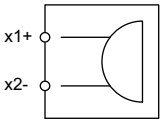
**28 Front bezel set for Mushroom-head pushbutton** page 19



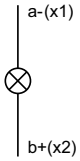

| | Soldering terminal L | Soldering terminal (also pluggable) L1 | Universal terminal U | Universal terminal + diode U+D |
|---|---|---|---|---|
| 1NC+1NO | 48.5 | 56 | - | - |
| 2NC+2NO | 56 | - | - | - |
| 3NC+3NO | 63.5 | - | - | - |
| 4NC+4NO | 71 | - | - | - |
| 1NC+1NO+D | - | - | - | 63.5 |
| 2NC+2NO+D | - | - | - | 71 |
| 1NC, 1NO, 1NC+1NO, 2NC, 2NO | | | 55,5 | - |

## Circuit drawing

**1 Buzzer** page 7 **| Buzzer, flush mounting** page 13

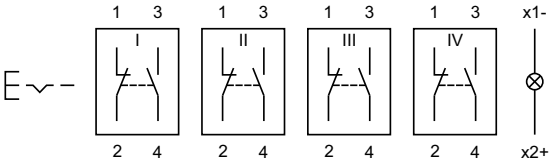



**2 Indicator actuator full face illumination** page 6 **| Indicator actuator front illumination** page 6 **| Indicator actuator, flush mounting** page 13

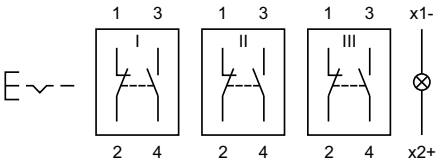



**3 Indicator actuator full face illumination** page 6 **| Indicator actuator front illumination** page 6 **| Indicator actuator, flush mounting** page 13

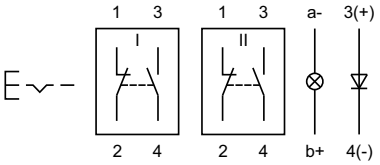
**4 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



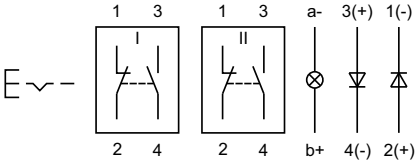

**5 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



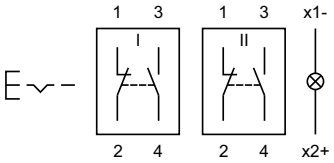

**6 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



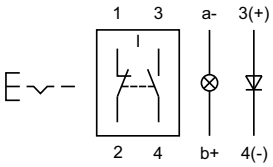

**7 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



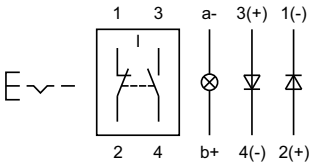
**8 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



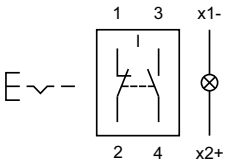

**9 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



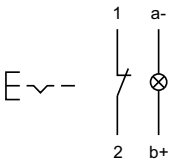

**10 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



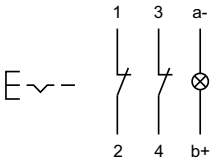

**11 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



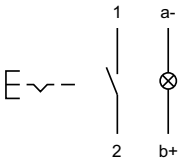

**12 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



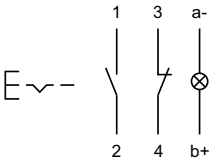

**13 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



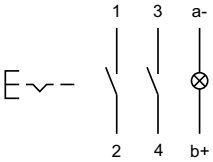

**14 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



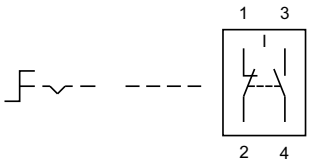
**15 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



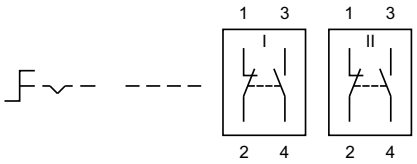

**16 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



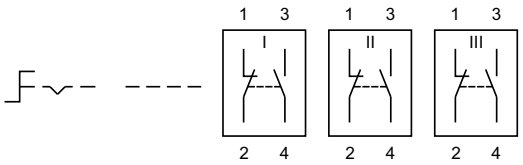

**17 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



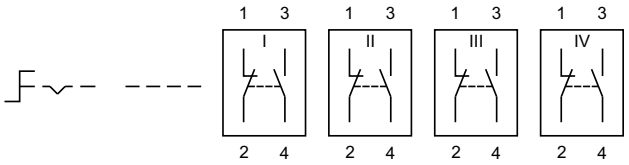

**18 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16




**19 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16

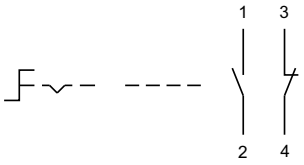



**20 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16

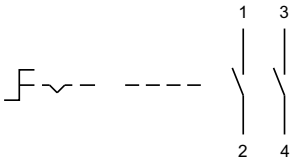



**21 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16

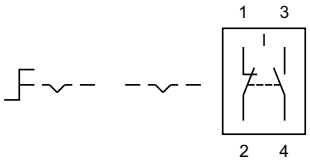
**22 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



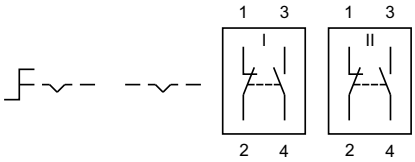

**23 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



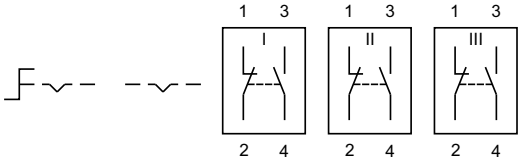

**24 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



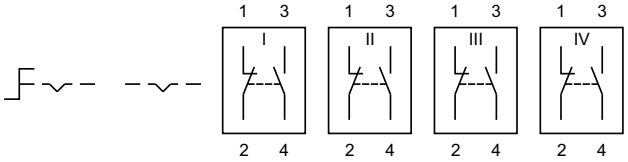

**25 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



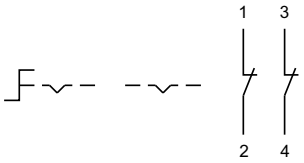

**26 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



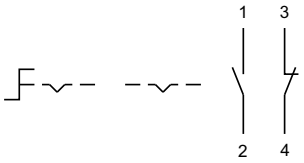

**27 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



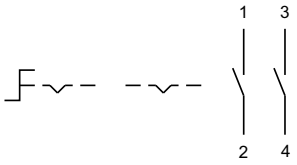

**28 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



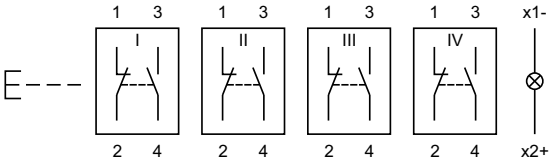

**29 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



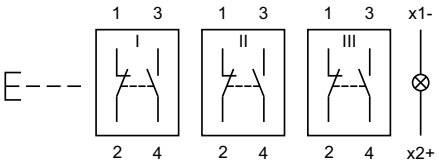
**30 Selector switch 2 positions** page 12 **| Selector switch actuator 2 positions, flush mounting** page 16



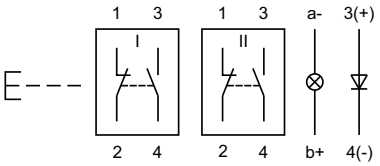

**31 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



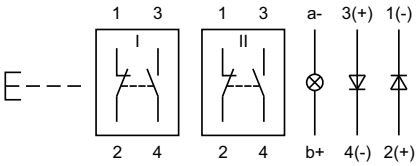

**32 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



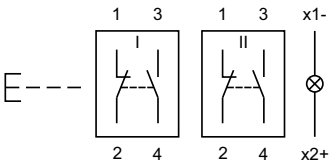

**33 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



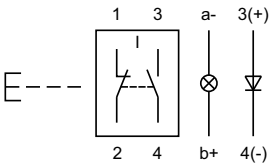

**34 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



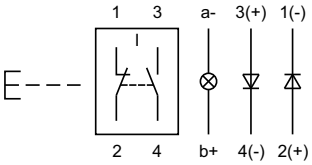

**35 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



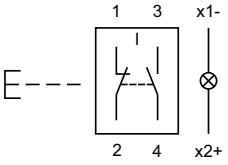

**36 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



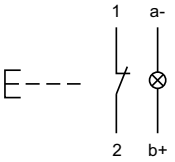
**37 Illuminated actuator pushbutton** page 8 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



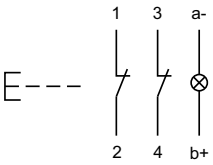

**38 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



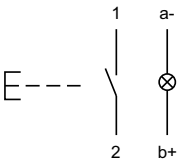

**39 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



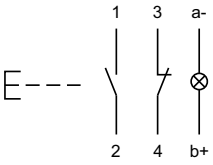

**40 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



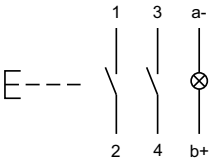

**41 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



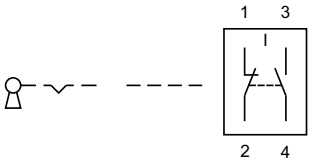

**42 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



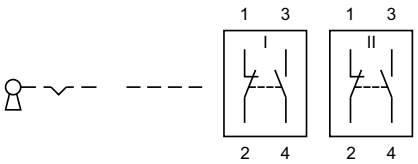

**43 Illuminated actuator pushbutton** page 8 **| Mushroom-head actuator pushbutton** page 9 **| Illuminated mushroom-head actuator pushbutton** page 10 **| Illuminated pushbutton actuator, flush mounting** page 14



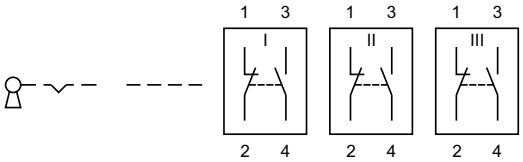
**44 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



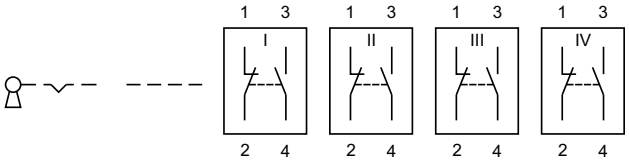

**45 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



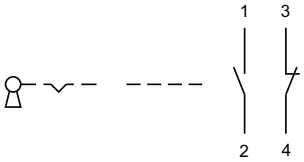

**46 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



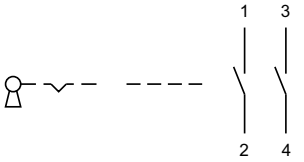

**47 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



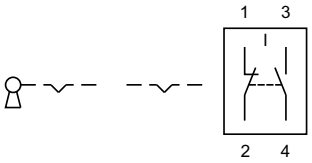

**48 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



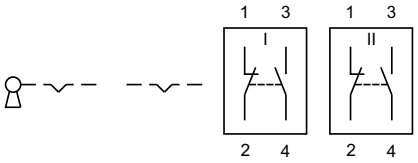

**49 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



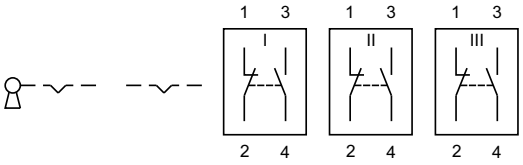

**50 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



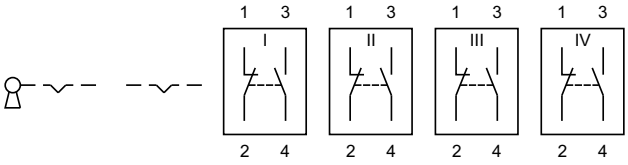

**51 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



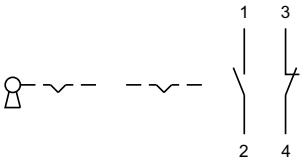
**52 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



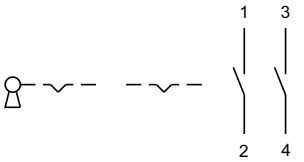

**53 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



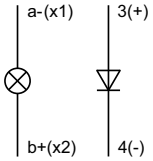

**54 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15



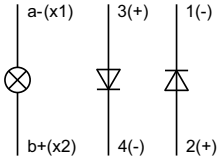

**55 Keylock switch 2 positions** page 11 **| Keylock switch actuator 2 positions, flush mounting** page 15




**56 Indicator actuator full face illumination** page 6




**57 Indicator actuator full face illumination** page 6



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http://moschip.ru/get-element

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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