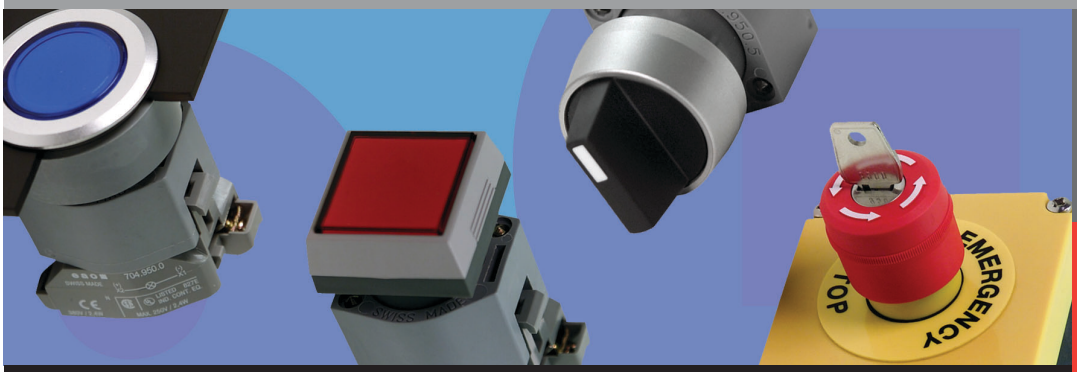
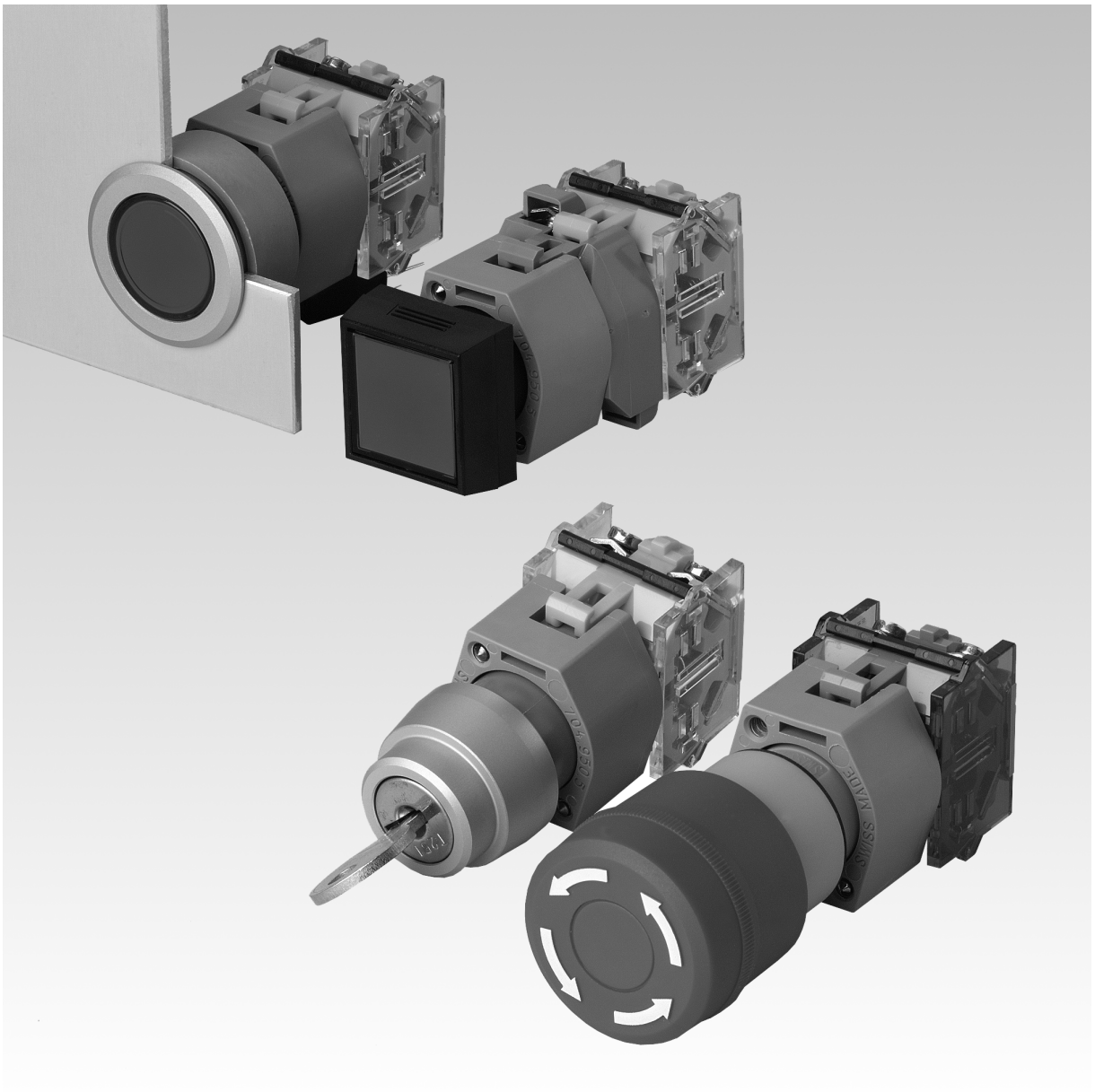


EAO Product Information

Series 04



Index

Series 04

General Notes

Series 04, a modular switching system, offers users a wide range of possible combinations. A broad variety of actuators is available, round or square in shape, for use as pushbuttons, illuminated pushbuttons, keylock switches or lever-operated switches, and indicators. Other special actuators, such as mushroom heads or emergency stop switches and buzzers can also be supplied.

Configuration

Max. 3 switching elements, as snap-action or slow-make switches, can be clipped as modules to each actuator. Each switching element is equipped with 1 or 2 independent switching system with normally closed or normally open contact. The standard contact material is hard silver.

Mounting

The Series 04 standard pushbuttons are mounted in a 22,5 mm dia. cut-out. Flush mounted pushbuttons are mounted in a 30,5 mm dia cut-out.

Terminals

The switching elements and the lamp blocks can be supplied with screw or plug-in terminals.

Lenses

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

Marking

For engravings, hot stamping, film inserts with standard legends or symbols, see page 143.

Illumination

Illuminated pushbuttons or indicators can be supplied with lamps Ba 9s (6-130 V), Multi-LED lamps Ba 9s (6, 15, 24, 48 V) or with neon lamps Ba 9s.

Position indicating

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

Keylock switch

Standard lock No. = 251 with ending of part No. 0 (example 704.335.0). Following lock No. also available (lock No./ending of part No.) 252/1, 253/2, 254/3, 255/4, 256/5, 257/6, 259/8, 260/9.
2 keys will be delivered per keylock switch.

Rotary switch

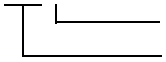
The rotary switches of Series 04 are ideal control and instrument switches. The switch types (CG4-1) are suitable special for switch for small voltages. They comply with the rules IEC 947-3 and VDE 0660, part 107.

The axial arrangement of the connector block gives the opportiunity to mount the switches side-by-side or next to the cable duct. The contact marking remains legible in mounted situation too.

The required space of this switch is very small.

Number structure

704.XXX.X



Lens colour

Switch variant

704.9XX.X — Switching element

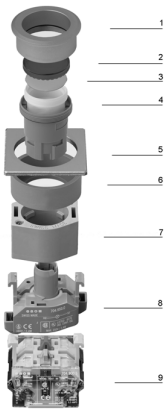
Example:

-Illuminated pushbutton; round, momentary action, plastic front ring, black; lens red
704.029.2

-Snap-action switching element, 1 normally open contact, screw terminals,
hard silver
704.900.1

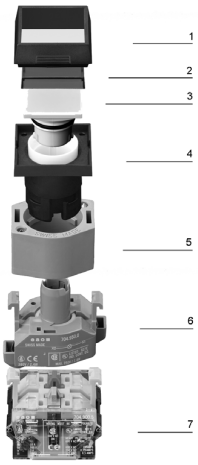
All dimensions in mm.
We reserve the right to modify technical data.

illuminated pushbutton for flush mounting



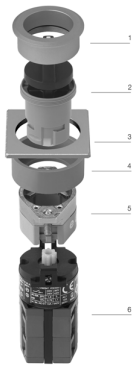
1 front bezel set for flush mounting
2 lens
3 marking plate
4 actuator housing
5 front plate
6 pressure ring
7 bayonet flange
8 lamp element
9 switching element

illuminated pushbutton



1 front bezel
2 lens
3 lens holder
4 actuator housing
5 bayonet flange
6 lamp element
7 switching element

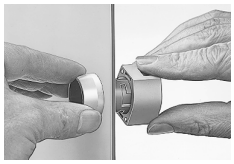
rotary switch for flush mounting



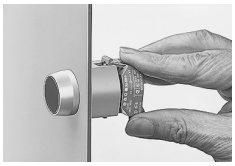
1 front bezel set for flush mounting
2 rotary switch actuator
3 front panel
4 pressure ring
5 mounting flange
6 rotary switch element

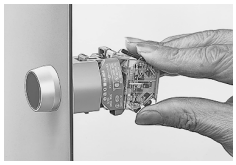
rotary switch

1 rotary switch actuator
2 mounting flange
3 rotary switch element

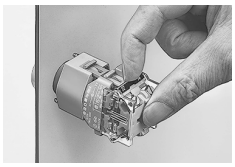


The actuator is inserted from the front through the mounting hole and locked at the rear by twisting the boyonet flange. The switch is fixed and positioned by evenly tightening the two screws in the mounting flange to a max torque of 25 Ncm. A reducing ring can be used to fit 22.5 mm switches into a 30.5 mm hole.

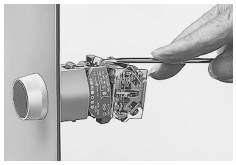




The switching elements (max. 3) or transformers can easily be snapped in position without tools. Lamps, neon lamps or Multi-Led lamps, as well as marking caps can be inserted or fitted from the front.

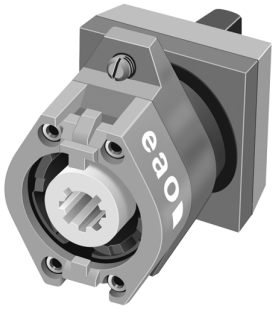


We can supply switching elements with terminal labels inserted .



To dismantle the switches or transformers one arm of the snap-on system is eased up with a screwdriver so that the snapped-on parts can be easily removed.

Rotary switch



Actuator

Rotary switch element

Mounting instructions, installation in Ø 22.5 mm hole

Step 1
Mounting the actuator element

1. Insert actuator from the front into the mounting hole Ø 22.5 mm.
2. Push mounting flange onto the actuator from the back and latch with bayonet.
3. Screw flange on with the two threaded pins.
4. Put lever into the reference position (9 o‘clock).

Step 2
Snap rotary switch onto the actuator:

1. First check switch number with circuit diagram.
2. Put switching position of the cam at 9 o‘clock.
3. Snap rotary switch element onto the mounting flange, pay attention to the position of the driver.
4. Check to see that the two snap-action legs have engaged.
5. Check the switching action in accordance with the switching sequence.

indicator compact, full face illumination

filament lamp page 104
LED page 104

	illumination	lens cap/marking cap	colour of lens cap	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
indicator compact, full face illumination with plastic lamp cap	for neon lamp, max. 250 V	transparent ribbed diffuser	blue	**704.021.6**	1	1	1	0,020
			yellow	**704.021.4**	1	1	1	0,020
			green	**704.021.5**	1	1	1	0,020
			clear	**704.021.7**	1	1	1	0,020
			red	**704.021.2**	1	1	1	0,020
	for incandescent lamp max.2.6 W, or for Multi-LED lamp	translucent diffuser	blue	**704.020.6**	1	1	1	0,020
			yellow	**704.020.4**	1	1	1	0,020
			green	**704.020.5**	1	1	1	0,020
			clear	**704.020.7**	1	1	1	0,020
			red	**704.020.2**	1	1	1	0,020
with integrated lamp protective series resistor (125/60 V) and plastic lamp cap	for incandescent lamp 60 V, max. 2.6 W	translucent diffuser	blue	**704.024.6**	1	1	1	0,025
			yellow	**704.024.4**	1	1	1	0,025
			green	**704.024.5**	1	1	1	0,025
			clear	**704.024.7**	1	1	1	0,025
			red	**704.024.2**	1	1	1	0,025
with integrated lamp protective series resistor (220/130 V) and plastic lamp cap	for incandescent lamp 130 V, max. 2.6 W	translucent diffuser	blue	**704.022.6**	1	1	1	0,025
			yellow	**704.022.4**	1	1	1	0,025
			green	**704.022.5**	1	1	1	0,025
			clear	**704.022.7**	1	1	1	0,025
			red	**704.022.2**	1	1	1	0,025

circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

indicator/flasher full face illumination

filament lamp page page 104
LED page 104
flasher element page 102

	colour of front bezel/ ring	lens cap/marking cap	colour of lens cap	⌀ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
indicator/flasher full face illumination with plastic lamp cap and front bezel, for filament lamp or multi-LED	grey	transparent/translucent	blue	**704.200.6**		1	2	2	0,050
			yellow	**704.200.4**		1	2	2	0,050
			green	**704.200.5**		1	2	2	0,050
			clear	**704.200.7**		1	2	2	0,050
			red	**704.200.2**		1	2	2	0,050
	black	transparent/translucent	blue	**704.199.6**		1	2	2	0,050
			yellow	**704.199.4**		1	2	2	0,050
			green	**704.199.5**		1	2	2	0,050
			clear	**704.199.7**		1	2	2	0,050
			red	**704.199.2**		1	2	2	0,050
with plastic lamp cap, for neon lamp	without	transparent, ribbed	blue		**704.001.6**	1	2	2	0,050
			yellow		**704.001.4**	1	2	2	0,050
			green		**704.001.5**	1	2	2	0,050
			clear		**704.001.7**	1	2	2	0,050
			red		**704.001.2**	1	2	2	0,050
with plastic lamp cap, for filament lamp or multi-LED	without	transparent/translucent	blue		**704.000.6**	1	2	2	0,050
			yellow		**704.000.4**	1	2	2	0,050
			green		**704.000.5**	1	2	2	0,050
			clear		**704.000.7**	1	2	2	0,050
			red		**704.000.2**	1	2	2	0,050

circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

indicator/flasher front illumination

filament lamp page 104
LED page 104
flasher element page 102

	colour of front bezel/ring	lens/marking foil	colour of lens	⧠ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
indicator/flasher front illumination with plastic lens and front bezel, for neon lamp	grey	transparent, ribbed	blue	**704.203.6**		1	2	2	0,050
			yellow	**704.203.4**		1	2	2	0,050
			green	**704.203.5**		1	2	2	0,050
			clear	**704.203.7**		1	2	2	0,050
			red	**704.203.2**		1	2	2	0,050
	black	transparent, ribbed	blue	**704.207.6**		1	2	2	0,050
			yellow	**704.207.4**		1	2	2	0,050
			green	**704.207.5**		1	2	2	0,050
			clear	**704.207.7**		1	2	2	0,050
			red	**704.207.2**		1	2	2	0,050
with plastic lens and front bezel, for filament lamp or multi-LED	grey	transparent/translucent	blue	**704.202.6**		1	2	2	0,050
			yellow	**704.202.4**		1	2	2	0,050
			green	**704.202.5**		1	2	2	0,050
			clear	**704.202.7**		1	2	2	0,050
			red	**704.202.2**		1	2	2	0,050
	black	transparent/translucent	blue	**704.206.6**		1	2	2	0,050
			yellow	**704.206.4**		1	2	2	0,050
			green	**704.206.5**		1	2	2	0,050
			clear	**704.206.7**		1	2	2	0,050
			red	**704.206.2**		1	2	2	0,050
with plastic lens and front ring, for neon lamp	grey	transparent, ribbed	blue		**704.003.6**	1	2	2	0,050
			yellow		**704.003.4**	1	2	2	0,050
			green		**704.003.5**	1	2	2	0,050
			clear		**704.003.7**	1	2	2	0,050
			red		**704.003.2**	1	2	2	0,050
	black	transparent, ribbed	blue		**704.007.6**	1	2	2	0,050
			yellow		**704.007.4**	1	2	2	0,050
			green		**704.007.5**	1	2	2	0,050
			clear		**704.007.7**	1	2	2	0,050
			red		**704.007.2**	1	2	2	0,050

Continued on next page

	colour of front bezel/ring	lens/marking foil	colour of lens	⌀ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
indicator/flasher front illumination with plastic lens and front ring, for filament lamp or multi-LED	grey	transparent/translucent	blue		**704.002.6**	1	2	2	0,050
			yellow		**704.002.4**	1	2	2	0,050
			green		**704.002.5**	1	2	2	0,050
			clear		**704.002.7**	1	2	2	0,050
			red		**704.002.2**	1	2	2	0,050
	black	transparent/translucent	blue		**704.006.6**	1	2	2	0,050
			yellow		**704.006.4**	1	2	2	0,050
			green		**704.006.5**	1	2	2	0,050
			clear		**704.006.7**	1	2	2	0,050
			red		**704.006.2**	1	2	2	0,050

circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

pushbutton actuator

switching element page 101

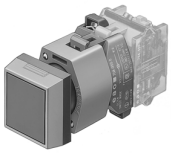
	switching action	material/colour of front bezel/ring	material/colour of lens	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
pushbutton actuator	M	aluminium, natural	aluminium, blue		**704.011.6**	2	3	2	0,040
			aluminium, yellow		**704.011.4**	2	3	2	0,040
			aluminium, green		**704.011.5**	2	3	2	0,040
			aluminium, natural		**704.011.8**	2	3	2	0,040
			aluminium, red		**704.011.2**	2	3	2	0,040
			aluminium, black		**704.011.0**	2	3	2	0,040
			plastic, blue		**704.012.6**	2	3	2	0,040
			plastic, yellow		**704.012.4**	2	3	2	0,040
			plastic, green		**704.012.5**	2	3	2	0,040
			plastic, clear		**704.012.7**	2	3	2	0,040
			plastic, red		**704.012.2**	2	3	2	0,040
			plastic, black		**704.012.0**	2	3	2	0,040
		aluminium, natural with protective cover	plastic, blue		**704.013.6**	2	3	2	0,040
			plastic, yellow		**704.013.4**	2	3	2	0,040
			plastic, green		**704.013.5**	2	3	2	0,040
			plastic, clear		**704.013.7**	2	3	2	0,040
			plastic, red		**704.013.2**	2	3	2	0,040
			plastic, black		**704.013.0**	2	3	2	0,040
		plastic, grey	plastic, blue	**704.210.6**	**704.010.6**	2	3	2	0,040
			plastic, yellow	**704.210.4**	**704.010.4**	2	3	2	0,040
			plastic, green	**704.210.5**	**704.010.5**	2	3	2	0,040
			plastic, clear	**704.210.7**	**704.010.7**	2	3	2	0,040
			plastic, red	**704.210.2**	**704.010.2**	2	3	2	0,040
			plastic, black	**704.210.0**	**704.010.0**	2	3	2	0,040
		plastic, black	plastic, blue	**704.209.6**	**704.009.6**	2	3	2	0,040
			plastic, yellow	**704.209.4**	**704.009.4**	2	3	2	0,040
			plastic, green	**704.209.5**	**704.009.5**	2	3	2	0,040
			plastic, clear	**704.209.7**	**704.009.7**	2	3	2	0,040
			plastic, red	**704.209.2**	**704.009.2**	2	3	2	0,040
			plastic, black	**704.209.0**	**704.009.0**	2	3	2	0,040

Continued on next page

	switching action	material/colour of front bezel/ring	material/colour of lens	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
pushbutton actuator	MA	aluminium, natural	aluminium, blue		**704.041.6**	3	3	2	0,040
			aluminium, yellow		**704.041.4**	3	3	2	0,040
			aluminium, green		**704.041.5**	3	3	2	0,040
			aluminium, natural		**704.041.8**	3	3	2	0,040
			aluminium, red		**704.041.2**	3	3	2	0,040
			aluminium, black		**704.041.0**	3	3	2	0,040
			plastic, blue		**704.042.6**	3	3	2	0,040
			plastic, yellow		**704.042.4**	3	3	2	0,040
			plastic, green		**704.042.5**	3	3	2	0,040
			plastic, clear		**704.042.7**	3	3	2	0,040
			plastic, red		**704.042.2**	3	3	2	0,040
			plastic, black		**704.042.0**	3	3	2	0,040
		aluminium, natural with protective cover	plastic, blue		**704.043.6**	3	3	2	0,040
			plastic, yellow		**704.043.4**	3	3	2	0,040
			plastic, green		**704.043.5**	3	3	2	0,040
			plastic, clear		**704.043.7**	3	3	2	0,040
			plastic, red		**704.043.2**	3	3	2	0,040
			plastic, black		**704.043.0**	3	3	2	0,040
		plastic, grey	plastic, blue	**704.240.6**	**704.040.6**	3	3	2	0,040
			plastic, yellow	**704.240.4**	**704.040.4**	3	3	2	0,040
			plastic, green	**704.240.5**	**704.040.5**	3	3	2	0,040
			plastic, clear	**704.240.7**	**704.040.7**	3	3	2	0,040
			plastic, red	**704.240.2**	**704.040.2**	3	3	2	0,040
			plastic, black	**704.240.0**	**704.040.0**	3	3	2	0,040
		plastic, black	plastic, blue	**704.239.6**	**704.039.6**	3	3	2	0,040
			plastic, yellow	**704.239.4**	**704.039.4**	3	3	2	0,040
			plastic, green	**704.239.5**	**704.039.5**	3	3	2	0,040
			plastic, clear	**704.239.7**	**704.039.7**	3	3	2	0,040
			plastic, red	**704.239.2**	**704.039.2**	3	3	2	0,040
			plastic, black	**704.239.0**	**704.039.0**	3	3	2	0,040

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

illuminated pushbutton actuator



filament lamp page 104
LED page 104
switching element page 101

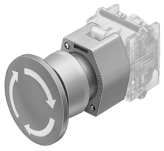
	switching action	material/colour of front bezel/ ring	material/colour of lens	⌀ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
illuminated pushbutton actuator with plastic lens	M	aluminium, natural	plastic, blue		**704.032.6**	4	4	2	0,056
			plastic, yellow		**704.032.4**	4	4	2	0,056
			plastic, green		**704.032.5**	4	4	2	0,056
			plastic, clear		**704.032.7**	4	4	2	0,056
			plastic, red		**704.032.2**	4	4	2	0,056
		aluminium, natural with protective cover	plastic, blue		**704.033.6**	4	4	2	0,056
			plastic, yellow		**704.033.4**	4	4	2	0,056
			plastic, green		**704.033.5**	4	4	2	0,056
			plastic, clear		**704.033.7**	4	4	2	0,056
			plastic, red		**704.033.2**	4	4	2	0,056
		plastic, grey	plastic, blue	**704.230.6**	**704.030.6**	4	4	2	0,056
			plastic, yellow	**704.230.4**	**704.030.4**	4	4	2	0,056
			plastic, green	**704.230.5**	**704.030.5**	4	4	2	0,056
			plastic, clear	**704.230.7**	**704.030.7**	4	4	2	0,056
			plastic, red	**704.230.2**	**704.030.2**	4	4	2	0,056
		plastic, black	plastic, blue	**704.229.6**	**704.029.6**	4	4	2	0,056
			plastic, yellow	**704.229.4**	**704.029.4**	4	4	2	0,056
			plastic, green	**704.229.5**	**704.029.5**	4	4	2	0,056
			plastic, clear	**704.229.7**	**704.029.7**	4	4	2	0,056
			plastic, red	**704.229.2**	**704.029.2**	4	4	2	0,056

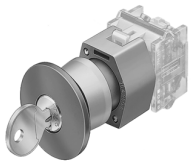
Continued on next page

	switching action	material/colour of front bezel/ ring	material/colour of lens	⌀ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
illuminated pushbutton actuator with plastic lens	MA	aluminium, natural	plastic, blue		**704.062.6**	5	4	2	0,056
			plastic, yellow		**704.062.4**	5	4	2	0,056
			plastic, green		**704.062.5**	5	4	2	0,056
			plastic, clear		**704.062.7**	5	4	2	0,056
			plastic, red		**704.062.2**	5	4	2	0,056
		aluminium, natural with protective cover	plastic, blue		**704.063.6**	5	4	2	0,056
			plastic, yellow		**704.063.4**	5	4	2	0,056
			plastic, green		**704.063.5**	5	4	2	0,056
			plastic, clear		**704.063.7**	5	4	2	0,056
			plastic, red		**704.063.2**	5	4	2	0,056
		plastic, grey	plastic, blue	**704.260.6**	**704.060.6**	5	4	2	0,056
			plastic, yellow	**704.260.4**	**704.060.4**	5	4	2	0,056
			plastic, green	**704.260.5**	**704.060.5**	5	4	2	0,056
			plastic, clear	**704.260.7**	**704.060.7**	5	4	2	0,056
			plastic, red	**704.260.2**	**704.060.2**	5	4	2	0,056
		plastic, black	plastic, blue	**704.259.6**	**704.059.6**	5	4	2	0,056
			plastic, yellow	**704.259.4**	**704.059.4**	5	4	2	0,056
			plastic, green	**704.259.5**	**704.059.5**	5	4	2	0,056
			plastic, clear	**704.259.7**	**704.059.7**	5	4	2	0,056
			plastic, red	**704.259.2**	**704.059.2**	5	4	2	0,056

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

emergency stop switch actuator





switching element for emergency stop switch page 102
label for emergency stop switch page 106

	switching action	unlocking	material of front ring	marking of mushroom-head cap	40 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
emergency stop switch actuator with red mushroom-head cap, unlocking clockwise	MA	twist to release	aluminium	arrows	**704.075.2**	6	5	3	0,047
				stop	**704.075.3**	6	5	3	0,047
			plastic	arrows	**704.074.2**	6	5	3	0,047
				stop	**704.074.3**	6	5	3	0,047
with red mushroom-head cap, standard lock 251, unlocking clockwise	MA	key to release	aluminium	without	**704.078.0**	6	6	3	0,063
			plastic	without	**704.076.0**	6	6	3	0,063

switching action : maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

emergency stop switch actuator foolproof, EN 418


switching element for emergency stop switch page 102
label for emergency stop switch page 106
protective shroud for emergency stop switch page 106

	switching action	unlocking	marking of mushroom-head cap	37 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
emergency stop switch actuator foolproof, EN 418 as per EN 418 red mushroom-head cap, yellow actuator, unlocking anti-clockwise, max. 2 slow-make elements can be clipped on	MA	twist to release	arrows	**704.064.2**	6	7	4	0,300
as per EN 418 red mushroom-head cap, yellow actuator, standard lock no. 9500 unlocking anti-clockwise, max. 2 slow-make elements can be clipped on	MA	key to release	arrows	**704.066.2**	6	8	4	0,300

switching action : maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

pushbutton actuator with mushroom-head cap

switching element page 101

	switching action	material of front ring	colour of mushroom-head cap	40 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
pushbutton actuator with mushroom-head cap	M	aluminium anodized	yellow	**704.071.4**	2	5	3	0,044
			green	**704.071.5**	2	5	3	0,044
			red	**704.071.2**	2	5	3	0,044
			black	**704.071.0**	2	5	3	0,044
		plastic	yellow	**704.070.4**	2	5	3	0,044
			green	**704.070.5**	2	5	3	0,044
			red	**704.070.2**	2	5	3	0,044
			black	**704.070.0**	2	5	3	0,044
	MA	aluminium anodized	yellow	**704.073.4**	3	5	3	0,044
			green	**704.073.5**	3	5	3	0,044
			red	**704.073.2**	3	5	3	0,044
			black	**704.073.0**	3	5	3	0,044
		plastic	yellow	**704.072.4**	3	5	3	0,044
			green	**704.072.5**	3	5	3	0,044
			red	**704.072.2**	3	5	3	0,044
			black	**704.072.0**	3	5	3	0,044

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

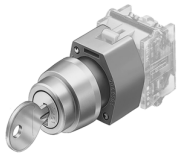
illuminated pushbutton actuator with mushroom-head cap

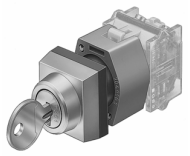
filament lamp page 104
LED page 104
switching element page 101

	switching action	material of front ring	colour of mushroom-head cap	40 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
illuminated pushbutton actuator with mushroom-head cap	M	plastic	blue	**704.084.6**	4	9	3	0,044
			yellow	**704.084.4**	4	9	3	0,044
			green	**704.084.5**	4	9	3	0,044
			clear	**704.084.7**	4	9	3	0,044
			red	**704.084.2**	4	9	3	0,044
	MA	plastic	blue	**704.086.6**	5	9	3	0,044
			yellow	**704.086.4**	5	9	3	0,044
			green	**704.086.5**	5	9	3	0,044
			clear	**704.086.7**	5	9	3	0,044
			red	**704.086.2**	5	9	3	0,044

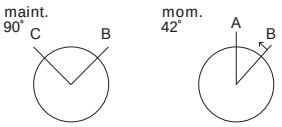
switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

keylock switch actuator 2 positions





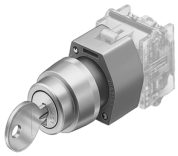
switching element page 101

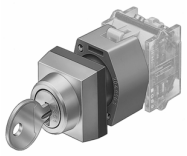


	switching action	key removable in	⌀ 30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
keylock switch actuator 2 positions position A: basic position position B: momentary action 42° standard lock 251, other lock numbers on request	M	A	**704.343.0**	**704.123.0**	7	10	2	0,070
position C + B: maintained action 90° standard lock 251, other lock numbers on request	MA	B	**704.340.0**	**704.120.0**	8	10	2	0,070
		C	**704.341.0**	**704.121.0**	8	10	2	0,070
		C+B	**704.342.0**	**704.122.0**	8	10	2	0,070

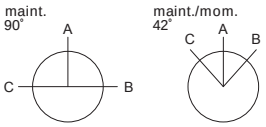
switching action : momentary action = M, maintained action = MA
standard lock No. = 251 with ending of part No. 0 (example 704.335.0).
Following lock No. also available (lock No./ending of part No.)
252/1, 253/2, 254/3, 255/4, 256/5, 257/6, 259/8, 260/9.
Spare key 704.989 can be ordered. Indicate lock no.
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

keylock switch actuator 3 positions





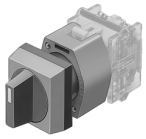
switching element page 101



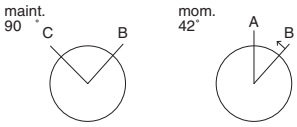
	switching action	key removable in	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
keylock switch actuator 3 positions position C + B: momentary action 45° position A: basic position standard lock 251, other lock numbers on request	momentary - 0 - momentary	A	**704.335.0**	**704.115.0**	10	10	2	0,070
	maintained - 0 - maintained	C+A+B	**704.333.0**		9	10	2	0,070
position C + B: maintained action 42° position A: basic position standard lock 251, other lock numbers on request	maintained - 0 - maintained	A	**704.334.0**	**704.114.0**	9	10	2	0,070
		C+B	**704.336.0**	**704.116.0**	9	10	2	0,070
position C + B: maintained action 90° position A: basic position standard lock 251, other lock numbers on request	maintained - 0 - maintained	C+A+B		**704.113.0**	9	10	2	0,070
position C: momentary action 42° position A: basic position position B: maintained action 42° standard lock 251, other lock numbers on request	momentary - 0 - maintained	A	**704.338.0**	**704.118.0**	12	10	2	0,070
position C: maintained action 42° position A: basic position position B: momentary action 42° standard lock 251, other lock numbers on request	maintained - 0 - momentary	C	**704.337.0**	**704.117.0**	11	10	2	0,070
		C + A	**704.344.0**	**704.124.0**	11	10	2	0,070

switching action
standard lock No. = 251 with ending of part No. 0 (example 704.335.0).
Following lock No. also available (lock No./ending of part No.)
252/1, 253/2, 254/3, 255/4, 256/5, 257/6, 259/8, 260/9.
Spare key 704.989 can be ordered. Indicate lock no.
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 2 positions, lever short

switching element page 101

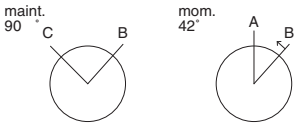


	switching action	lever	front bezel/ring	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 2 positions, lever short position A: basic position position B: momentary action 42°	M	black	aluminium		**704.413.0**	13	11	2	0,045
			plastic, grey	**704.512.0**	**704.412.0**	13	11	2	0,045
position C + B: maintained action 90°	MA	black	aluminium		**704.411.0**	14	11	2	0,045
			plastic, grey	**704.510.0**	**704.410.0**	14	11	2	0,045

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 2 positions, lever long

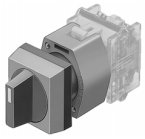

switching element page 101



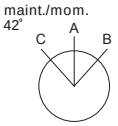
	switching action	lever	front bezel/ring	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 2 positions, lever long position A: basic position position B: momentary action 42°	M	black	aluminium		**704.103.0**	13	12	5	0,045
			plastic, grey	**704.302.0**	**704.102.0**	13	12	5	0,045
position C + B: maintained action 90°	MA	black	aluminium		**704.101.0**	14	12	5	0,045
			plastic, grey	**704.300.0**	**704.100.0**	14	12	5	0,045

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 3 positions, short lever



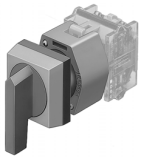
switching element page 101



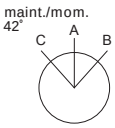
switching action	lever	front bezel/ring	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 3 positions, short lever position C + B: momentary action 42° position A: basic position	momentary - 0 - momentary	black	aluminium		**704.405.0**	16	11	2	0,045
			plastic, grey	**704.504.0**	**704.404.0**	16	11	2	0,045
position C + B: maintained action 42° position A: basic position	maintained - 0 - maintained	black	aluminium		**704.403.0**	15	11	2	0,045
			plastic, grey	**704.502.0**	**704.402.0**	15	11	2	0,045
position C: momentary action 42° position A: basic position position B: maintained action 42°	momentary - 0 - maintained	black	aluminium		**704.409.0**	19	11	2	0,045
			plastic, grey	**704.508.0**	**704.408.0**	18	11	2	0,045
position C: maintained action 42° position A: basic position position B: momentary action 42°	maintained - 0 - momentary	black	aluminium		**704.407.0**	17	11	2	0,045
			plastic, grey	**704.506.0**	**704.406.0**	17	11	2	0,045

switching action: momentary action = M, maintained action = MA, 0 = basic position
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 3 positions, lever long



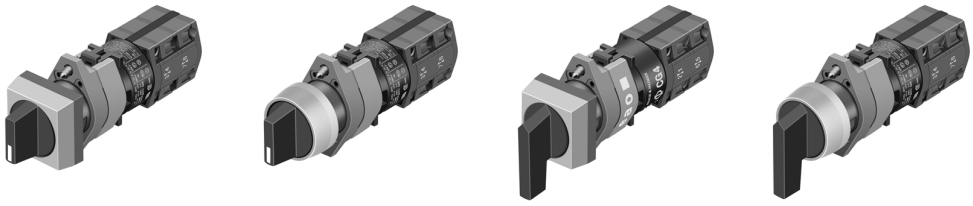
switching element page 101



switching action	lever	front bezel/ring	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 3 positions, lever long position C + B: momentary action 42° position A: basic position	momentary - 0 - momentary	black	aluminium		**704.095.0**	16	12	5	0,045
			plastic, grey	**704.294.0**	**704.094.0**	16	12	5	0,045
position C + B: maintained action 42° position A: basic position	maintained - 0 - maintained	black	aluminium		**704.093.0**	15	12	5	0,045
			plastic, grey	**704.292.0**	**704.092.0**	15	12	5	0,045
position C: momentary action 42° position A: basic position position B: maintained action 42°	momentary - 0 - maintained	black	aluminium		**704.099.0**	19	12	5	0,045
			plastic, grey	**704.298.0**	**704.098.0**	19	12	5	0,045
position C: maintained action 42° position A: basic position position B: momentary action 42°	maintained - 0 - momentary	black	aluminium		**704.097.0**	17	12	5	0,045
			plastic, grey	**704.296.0**	**704.096.0**	17	12	5	0,045

switching action: momentary action = M, maintained action = MA, 0 = basic position
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

rotary selector switch actuator



rotary selector switch element 30° page 103
rotary selector switch element 45° page 103
rotary selector switch element 60° page 103

	lever	front bezel/ring	30 x 30 mm Typ-Nr.	29 mm dia. Typ-Nr.	technical drawing	mounting dimensions	kg
rotary selector switch actuator	short	aluminium natural		**704-411.1KN**	13	6	0,045
		plastic, grey	**704-510.1KN**		13	6	0,045
	long	aluminium natural		**704-101.1KN**	13	6	0,045
		plastic, grey	**704-300.1KN**		13	6	0,045

hint: 0-position: 9 o'clock
technical drawings from page 122, mounting dimensions from page 129

buzzer

	operation voltage	front cap	connection method	example for using	29 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
buzzer IP 65	24 VDC	plastic, black	PT	Anw0427	**14-810.002**	20	14	2	0,016
		brass chromium-plated	PT	Anw0427	**14-810.902**	20	14	2	0,016

connection method : plug-in terminal = PT
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

indicator/flasher for flush mounting

filament lamp page 104
LED page 104
flasher element page 102

	illumination	colour of front ring	lens/marking foil	colour of lens	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
indicator/flasher for flush mounting with aluminium front ring and plastic lens	for incandescent lamp or Multi-LED	aluminium natural	transparent/translu-cent	blue	**704.006.618**	1	15	7	0,061
				yellow	**704.006.418**	1	15	7	0,061
				green	**704.006.518**	1	15	7	0,061
				clear	**704.006.718**	1	15	7	0,061
				red	**704.006.218**	1	15	7	0,061

circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

pushbutton actuator for flush mounting

switching element page 101

	switching action	material/colour of front ring	material/colour of lens	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
pushbutton actuator for flush mounting	M	aluminium natural	aluminium, blue	**704.011.618**	2	16	7	0,051
			aluminium, yellow	**704.011.418**	2	16	7	0,051
			aluminium, green	**704.011.518**	2	16	7	0,051
			aluminium, natural	**704.011.818**	2	16	7	0,051
			aluminium, red	**704.011.218**	2	16	7	0,051
			aluminium, black	**704.011.018**	2	16	7	0,051
			plastic, blue	**704.012.618**	2	16	7	0,051
			plastic, yellow	**704.012.418**	2	16	7	0,051
			plastic, green	**704.012.518**	2	16	7	0,051
			plastic, clear	**704.012.718**	2	16	7	0,051
			plastic, red	**704.012.218**	2	16	7	0,051
			plastic, black	**704.012.018**	2	16	7	0,051
	MA	aluminium natural	aluminium, blue	**704.041.618**	3	16	7	0,051
			aluminium, yellow	**704.041.418**	3	16	7	0,051
			aluminium, green	**704.041.518**	3	16	7	0,051
			aluminium, natural	**704.041.818**	3	16	7	0,051
			aluminium, red	**704.041.218**	3	16	7	0,051
			aluminium, black	**704.041.018**	3	16	7	0,051
			plastic, blue	**704.042.618**	3	16	7	0,051
			plastic, yellow	**704.042.418**	3	16	7	0,051
			plastic, green	**704.042.518**	3	16	7	0,051
			plastic, clear	**704.042.718**	3	16	7	0,051
			plastic, red	**704.042.218**	3	16	7	0,051
			plastic, black	**704.042.018**	3	16	7	0,051

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

illuminated pushbutton actuator for flush mounting

filament lamp page 104
LED page 104
switching element page 101

	switching action	material/colour of front ring	material/colour of lens	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
illuminated pushbutton actuator for flush mounting	M	aluminium natural	plastic, blue	**704.032.618**	4	17	7	0,067
			plastic, yellow	**704.032.418**	4	17	7	0,067
			plastic, green	**704.032.518**	4	17	7	0,067
			plastic, clear	**704.032.718**	4	17	7	0,067
			plastic, red	**704.032.218**	4	17	7	0,067
	MA	aluminium natural	plastic, blue	**704.062.618**	5	17	7	0,067
			plastic, yellow	**704.062.418**	5	17	7	0,067
			plastic, green	**704.062.518**	5	17	7	0,067
			plastic, clear	**704.062.718**	5	17	7	0,067
			plastic, red	**704.062.218**	5	17	7	0,067

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

emergency stop switch actuator for flush mounting

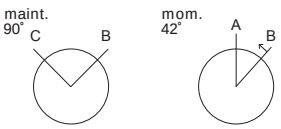
switching element for emergency stop switch page 102

	switching action	unlocking	front ring	marking of mushroom-head cap	40 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
emergency stop switch actuator for flush mounting	MA	twist to release	aluminium, natural	arrows	**704.075.218**	6	18	7	
				stop	**704.075.318**	6	18	7	
			aluminium, black	stop	**704.075.310**	6	18	7	

switching action : maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

keylock switch actuator with 2 positions for flush mounting

switching element page 101



	switching action	key removable in	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
keylock switch actuator with 2 positions for flush mounting position A: basic position position B: momentary action 42° standard lock 251, other lock numbers on request	M	A	**704.123.018**	7	19	7	0,099
position C + B: maintained action 90° standard lock 251, other lock numbers on request	MA	B	**704.120.018**	8	19	7	0,099
		C	**704.121.018**	8	19	7	0,099
		C+B	**704.122.018**	8	19	7	0,099

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

keylock switch actuator 3 positions for flush mounting

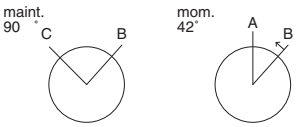
switching element page 101

maint./mom. 42° C A B	switching action	key removable in	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
keylock switch actuator 3 positions for flush mounting position C + B: momentary action 42° position A: basic position standard lock 251, other lock numbers on request	momentary - 0 - momentary	A	**704.115.018**	10	19	7	0,099
position C + B: maintained action 42° position A: basic position standard lock 251, other lock numbers on request	maintained - 0 - maintained	A	**704.114.018**	9	19	7	0,099
		C+B	**704.116.018**	9	19	7	0,099
position C + B: maintained action 90° position A: basic position standard lock 251, other lock numbers on request	maintained - 0 - maintained	C+A+B	**704.113.018**	9	19	7	0,099
position C: momentary action 42° position A: basic position position B: maintained action 42° standard lock 251, other lock numbers on request	momentary - 0 - maintained	A	**704.118.018**	12	19	7	0,099
position C: maintained action 42° position A: basic position position B: momentary action 42° standard lock 251, other lock numbers on request	maintained - 0 - momentary	C	**704.117.018**	11	19	7	0,099
		C + A	**704.124.018**	11	19	7	0,099

switching action: momentary action = M, maintained action = MA, 0 = basic position
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 2 positions for flush mounting, short lever

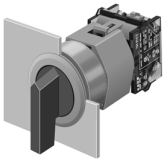
switching element page 101



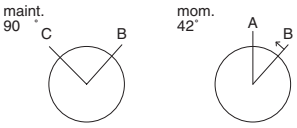
	switching action	lever	front ring	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 2 positions for flush mounting, short lever position A: basic position position B: momentary action 42°	M	short, black	aluminium natural	**704.413.018**	13	20	7	0,056
position C + B: maintained action 90°	MA	short, black	aluminium, natural	**704.411.018**	14	20	7	0,056

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 2 positions for flush mounting, long lever



switching element page 101

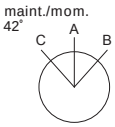


	switching action	lever	front ring	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 2 positions for flush mounting, long lever position A: basic position position B: momentary action 42°	M	long, black	aluminium natural	**704.103.018**	13	20	7	0,056
position C + B: maintained action 90°	MA	long, black	aluminium, natural	**704.101.018**	14	20	7	0,056

switching action : momentary action = M, maintained action = MA
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 3 positions for flush mounting, lever short

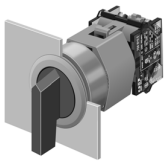
switching element page 101



	switching action	lever	front ring	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
selector switch actuator 3 positions for flush mounting, lever short position C + B: momentary action 42° position A: basic position	momentary - 0 - momentary	short, black	aluminium natural	**704.405.018**	16	20	7	0,056
			aluminium black	**704.405.010**	16	20	7	0,056
position C + B: maintained action 42° position A: basic position	maintained - 0 - maintained	short, black	aluminium natural	**704.403.018**	15	20	7	0,056
			aluminium black	**704.403.010**	15	20	7	0,056
position C: momentary action 42° position A: basic position position B: maintained action 42°	momentary - 0 - maintained	short, black	aluminium natural	**704.409.018**	19	20	7	0,056
			aluminium black	**704.409.010**	19	20	7	0,056
position C: maintained action 42° position A: basic position position B: momentary action 42°	maintained - 0 - momentary	short, black	aluminium natural	**704.407.018**	17	20	7	0,056
			aluminium black	**704.407.010**	17	20	7	0,056

switching action: momentary action = M, maintained action = MA, 0 = basic position
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

selector switch actuator 3 positions for flush mounting, long lever



switching element page 101

maint./mom. 42°
C A B

	switching action	lever	front ring	circuit drawing	35 mm dia. Typ-Nr.	technical drawing	mounting dimensions	kg
selector switch actuator 3 positions for flush mounting, long lever position C + B: momentary action 42° position A: basic position	momentary - 0 - momentary	long, black	aluminium natural		**704.095.018**	20	8	0,056
			aluminium black		**704.095.010**	20	8	0,056
position C + B: maintained action 42° position A: basic position	maintained - 0 - maintained	long, black	aluminium natural		**704.093.018**	20	8	0,056
			aluminium black		**704.093.010**	20	8	0,056
position C: momentary action 42° position A: basic position position B: maintained action 42°	momentary - 0 - maintained	long, black	aluminium natural		**704.099.018**	20	8	0,056
			aluminium black		**704.099.010**	20	8	0,056
position C: maintained action 42° position A: basic position position B: momentary action 42°	maintained - 0 - momentary	long, black	aluminium natural		**704.097.018**	20	8	0,056
			aluminium black		**704.097.010**	20	8	0,056

switching action: momentary action = M, maintained action = MA, 0 = basic position
technical drawings from page 122, mounting dimensions from page 129

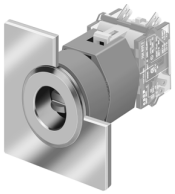
rotary selector switch actuator for flush mounting

rotary selector switch element 30° page 103
rotary selector switch element 45° page 103
rotary selector switch element 60° page 103

	lever	front ring	35 mm dia. Typ-Nr.	technical drawing	mounting dimensions	kg
rotary selector switch actuator for flush mounting	short	aluminium natural	**704.411.118KN**	21	9	0,056
	long	aluminium natural	**704.101.118KN**	21	9	0,056

technical drawings from page 122, mounting dimensions from page 129

key insert switch actuator 2 positions for flush mounting

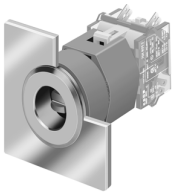


switching element page 101

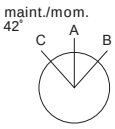
	switching action	38 mm dia. Typ-Nr.	technical drawing	mounting dimensions	kg
key insert switch actuator 2 positions for flush mounting	0 - M 45°	**704.103.0x28**	22	7	0,500
	0-main 90°	**704.101.0x28**	22	7	0,500

switching action : momentary action = M
max. dimensions of the rotor 9 x 9 mm
technical drawings from page 122, mounting dimensions from page 129

key insert switch actuator 3 positions for flush mounting



switching element page 101



	switching action	38 mm dia. Typ-Nr.	technical drawing	mounting dimensions	kg
key insert switch actuator 3 positions for flush mounting	momentary 45° - 0 - momentary 45°	**704.095.0x28**	22	7	0,500
	momentary 45° - 0 - maintained 45°	**704.099.0x28**	22	7	0,500
	maintained 45° - 0 - momentary 45°	**704.097.0x28**	22	7	0,500
	maintained 45° - 0 - maintained 45°	**704.093.0x28**	22	7	0,500

switching action: momentary action = M
max. dimensions of the rotor 9 x 9 mm
technical drawings from page 122, mounting dimensions from page 129

buzzer for flush mounting IP40

	operation voltage	front cap	connection method	35 mm dia. Typ-Nr.	circuit drawing	technical drawing	mounting dimensions	kg
buzzer for flush mounting IP40	24 VDC	plastic black	PT	**14-810.910**	20	23	7	0,016
		brass chromium-plated	PT	**14-810.918**	20	23	7	0,016

connection method : plug-in terminal = PT
circuit drawings from page 131, technical drawings from page 122, mounting dimensions from page 129

at front

front bezel-set for flush mounting

	use	material	colour	35 mm dia. Typ-Nr.	mounting dimensions	kg
front bezel-set for flush mounting	for indicator, pushbutton	aluminium anodized	natural	**704.955.1**	7	0,016
			black	**704.955.0**	7	0,016
		stainless steel	natural	**704.955.9**	7	0,029

mounting dimensions from page 129

legend plate

	use	front dimension	part no.	kg
legend plate adhesive, aluminium anodized, natural, can also be engraved	for pushbuttons for standard mounting	30 x 42 mm for 22.5 mm dia.mounting hole	**704.962.0**	0,002
		42 x 42 mm for 22.5 mm dia. mounting hole	**704.962.5**	0,003
		48 x 48 mm for 22.5 mm dia. mounting hole	**704.962.7**	0,004
	for pushbuttons for flush mounting	42 x 48 mm for 30.5 mm dia. mounting hole	**704.962.6**	0,004

legend plate

	use	front dimension	part no.	kg
legend plate adhesive, aluminium anodized, natural, can also be engraved	for pushbuttons for standard mounting	30 x 42 mm for 22.5 mm dia.mounting hole	**704.962.0**	0,002
		42 x 42 mm for 22.5 mm dia. mounting hole	**704.962.5**	0,003
		48 x 48 mm for 22.5 mm dia. mounting hole	**704.962.7**	0,004
	for pushbuttons for flush mounting	42 x 48 mm for 30.5 mm dia. mounting hole	**704.962.6**	0,004

protective cover

	use	29 mm dia. Typ-Nr.	technical drawing	kg
protective cover hinged, transparent, with means for sealing	for pushbuttons	**704.925.0**	24	0,007
	for selector switch short lever	**704.925.2**	24	0,007
	for pushbuttons, selector switch short lever with self "retourning"	**704.925.3**	24	0,007

technical drawings from page 122

protective cover for flush mounting

	use	colour	35 mm dia. Typ-Nr.	kg
protective cover for flush mounting hinged, transparent, with means for sealing aluminium anodized	for pushbuttons with spring	natural	**704.928.18**	0,020
	for pushbutton, selector switch short lever	natural	**704.928.38**	0,020
	for pushbuttons, selector switch short lever with self "retourning"	natural	**704.928.28**	0,020

protective front ring

for pushbutton/indicator front illumination

	material	29 mm dia. Typ-Nr.	kg
protective front ring with transparent silicone membrane (to resist sea water) temperature resistance: -40°C to + 85°C	brass, nickel plated	**704.600.2**	0,005
with transparent silicone membrane temperature resistance: -40°C to + 85°C	aluminium anodized	**704.600.3**	0,005

protective front ring for flush mounting

for pushbutton/indicator

	material	35 mm dia. Typ-Nr.	kg
protective front ring for flush mounting with transparent silicone membrane	aluminium anodized, natural	**704.955.3**	0,016
	aluminium anodized, black	**704.955.4**	0,016

blind plug

	colour	⌀ 30 x 30 mm Typ-Nr.	28 mm dia. Typ-Nr.	mounting dimensions	kg
blind plug	black		**704.960.7**	2	0,004
		704.964.7		2	0,009

mounting dimensions from page 129

spare key

standard lock 251, others available on request

	part no.	kg
spare key	**704.989.0**	0,006

at back

switching element

	switching system	contacts	connection method	material of contacts	part no.	circuit drawing	technical drawing	kg
switching element	SA	1 NO	plug-in terminal 6.3 mm	hard silver	**704.905.1**	21	25	0,021
			ST	gold/silver	**704.901.1**	21	25	0,021
				hard silver	**704.900.1**	21	25	0,021
				silver/palladium	**704.902.1**	21	25	0,021
		1 NC	plug-in terminal 6.3 mm	hard silver	**704.905.2**	22	25	0,021
			ST	gold/silver	**704.901.2**	22	25	0,021
				hard silver	**704.900.2**	22	25	0,021
				silver/palladium	**704.902.2**	22	25	0,021
		1 NC + 1 NO	plug-in terminal 6.3 mm	hard silver	**704.905.5**	25	25	0,028
			ST	gold/silver	**704.901.5**	25	25	0,028
				hard silver	**704.900.5**	25	25	0,028
				silver/palladium	**704.902.5**	25	25	0,028
		2 NO	plug-in terminal 6.3 mm	hard silver	**704.905.3**	23	25	0,028
			ST	gold/silver	**704.901.3**	23	25	0,028
				hard silver	**704.900.3**	23	25	0,028
				silver/palladium	**704.902.3**	23	25	0,028
		2 NC	plug-in terminal 6.3 mm	hard silver	**704.905.4**	24	25	0,028
			ST	gold/silver	**704.901.4**	24	25	0,028
				hard silver	**704.900.4**	24	25	0,028
				silver/palladium	**704.902.4**	24	25	0,028
	SM	1 NO	plug-in terminal 6.3 mm	hard silver	**704.915.1**	21	25	0,021
			ST	gold/silver	**704.911.1**	21	25	0,021
				hard silver	**704.910.1**	21	25	0,021
				silver/palladium	**704.912.1**	21	25	0,021
		1 NC	plug-in terminal 6.3 mm	hard silver	**704.915.2**	22	25	0,021
			ST	gold/silver	**704.911.2**	22	25	0,021
				hard silver	**704.910.2**	22	25	0,021
				silver/palladium	**704.912.2**	22	25	0,021
		1 NC + 1 NO	plug-in terminal 6.3 mm	hard silver	**704.915.5**	25	25	0,028
			ST	gold/silver	**704.911.5**	25	25	0,028
				hard silver	**704.910.5**	25	25	0,028
				silver/palladium	**704.912.5**	25	25	0,028
		2 NO	plug-in terminal 6.3 mm	hard silver	**704.915.3**	23	25	0,285
			ST	gold/silver	**704.911.3**	23	25	0,028
				hard silver	**704.910.3**	23	25	0,028
				silver/palladium	**704.912.3**	23	25	0,028
		2 NC	plug-in terminal 6.3 mm	hard silver	**704.915.4**	24	25	0,028
			ST	gold/silver	**704.911.4**	24	25	0,028
				hard silver	**704.910.4**	24	25	0,028
				silver/palladium	**704.912.4**	24	25	0,028

switching system: SA = snap-action switching element, SM = slow-make element
connection method: S 6.3 = plug-in terminal 6.3 mm, ST = screw terminal
contacts: NC = normally closed, NO = normally open
circuit drawings from page 131, technical drawings from page 122

switching element for emergency stop switch

	switching system	contacts	connection method	material of contacts	part no.	circuit drawing	technical drawing	kg
switching element for emergency stop switch	SM	1 NO	plug-in terminal 6.3 mm	hard silver	**704.915.1**	21	25	0,021
			ST	gold/silver	**704.911.1**	21	25	0,021
				hard silver	**704.910.1**	21	25	0,021
				silver/palladium	**704.912.1**	21	25	0,021
		1 NC	plug-in terminal 6.3 mm	hard silver	**704.915.2**	22	25	0,021
			ST	gold/silver	**704.911.2**	22	25	0,021
				hard silver	**704.910.2**	22	25	0,021
				silver/palladium	**704.912.2**	22	25	0,021
		1 NC + 1 NO	plug-in terminal 6.3 mm	hard silver	**704.915.5**	25	25	0,028
			ST	gold/silver	**704.911.5**	25	25	0,028
				hard silver	**704.910.5**	25	25	0,028
				silver/palladium	**704.912.5**	25	25	0,028
		2 NO	plug-in terminal 6.3 mm	hard silver	**704.915.3**	23	25	0,285
			ST	gold/silver	**704.911.3**	23	25	0,028
				hard silver	**704.910.3**	23	25	0,028
				silver/palladium	**704.912.3**	23	25	0,028
		2 NC	plug-in terminal 6.3 mm	hard silver	**704.915.4**	24	25	0,028
			ST	gold/silver	**704.911.4**	24	25	0,028
				hard silver	**704.910.4**	24	25	0,028
				silver/palladium	**704.912.4**	24	25	0,028

switching system: SA = snap-action switching element, SM = slow-make element
connection method: S 6.3 = plug-in terminal 6.3 mm, ST = screw terminal
contacts: NC = normally closed, NO = normally open
circuit drawings from page 131, technical drawings from page 122

flasher element

	operation voltage	connection method	part no.	technical drawing	kg
flasher element lamp voltage 130 V, 20 mA ambient temperature 0-50°C flasher frequency 1.5 Hz pulse ratio 1:1	230 VAC + 6%/-10%, 50-60 Hz	ST	**704.943.0**	26	0,024
lamp voltage 24 V;10 mA-85 mA ambient temperature 0-50°C flasher frequency 1.5 Hz pulse ratio 1:1	24 VDC +/-15%	ST	**704.943.5**	26	0,024
lamp voltage 60 V, 33 mA ambient temperature 0-50°C flasher frequency 1.5 Hz pulse ratio 1:1	115 VAC +/-10%, 50-60 Hz	ST	**704.943.1**	26	0,024

technical drawings from page 122

rotary selector switch element 30°

	contacts	start / end position	part no.
rotary selector switch element 30°	9 (1 pole)	a/i	**704-8A236**
	10 (1 pole)	a/k	**704-8A237**
	11 (1 pole)	a/l	**704-8A238**
	12 (1 pole)	a/m	**704-8A239**
		a/without limit	**704-8A639**

rotary selector switch element 45°

	contacts	start / end position	part no.
rotary selector switch element 45°	7 (1 pole)	a/g	**704-8A234**
	7 (2 pole)	a/g	**704-8A254**
	8 (1 pole)	a/h	**704-8A235**
	8 (2 pole)	a/h	**704-8A255**

rotary selector switch element 60°

	contacts	start / end position	part no.
rotary selector switch element 60°	3 (1 pole)	a/c	**704-8A230**
	3 (1 pole, d. c. separated)	a/c	**704-8A730**
	3 (2 pole)	a/c	**704-8A250**
	3 (3 pole)	a/c	**704-8A270**
	4 (1 pole)	a/d	**704-8A231**
	4 (1 pole, d. c. separated)	a/d	**704-8A731**
	4 (2 pole)	a/d	**704-8A251**
	4 (3 pole)	a/d	**704-8A271**
	5 (1 pole)	a/e	**704-8A232**
	5 (2 pole)	a/e	**704-8A252**
	5 (3 pole)	a/e	**704-8A272**
	6 (1 pole)	a/f	**704-8A233**
	6 (2 pole)	a/f	**704-8A253**

connecting diagrams as of page 137

terminal cover

	use	part no.	kg
terminal cover	for screw terminal	**704.964.5**	0,003

terminal marking

	Inscription	part no.	kg
terminal marking	13/21 33/41	**704.965.9**	0,001
1 NC + 1 NO (for 1. or. 2. switching element)	22/14 42/34	**704.966.0**	0,001
1 NC + 1 NO (for 3. or 4. switching element)	53/61 73/81	**704.966.1**	0,001
	62/54 82/74	**704.966.2**	0,001
2 NO (for 1. or 2. switching element)	13/23 33/43	**704.965.1**	0,001
	24/14 44/34	**704.965.2**	0,001
2 NO (for 3. or 4. switching element)	53/63 73/83	**704.965.3**	0,001
	64/54 84/74	**704.965.4**	0,001
2 NC (for 1. or 2. switching element)	11/21 31/41	**704.965.5**	0,001
	22/12 42/32	**704.965.6**	0,001
2 NC (for 3. or 4. switching element)	51/61 71/81	**704.965.7**	0,001
	62/52 82/72	**704.965.8**	0,001

for illumination

Filament lamp

	voltage/current	part no.	kg
Filament lamp base Ba9s	6 AC/DC/200 mA	**10-1406.1369**	0,002
	12 AC/DC/100 mA	**10-1409.1329**	0,002
	24 AC/DC/50 mA	**10-1412.1279**	0,002
	36 AC/DC/56 mA	**10-1416.1289**	0,002
	48 AC/DC/42 mA	**10-1419.1249**	0,002
	60 AC/DC/33 mA	**10-1420.1219**	0,002
	110 AC/DC/22 mA	**10-1422.1179**	0,002
	130 AC/DC/20 mA	**10-1424.1179**	0,002

LED

	number of chips	voltage/current	colour	part no.	kg
LED base Ba9s **Note:** **For optimal illumination we strongly recommend using our new single-chip LEDs.** **For new designs, only the new single-chip LEDs should be chosen. They can be found on page 669.**	1 chip	24 VDC/14 mA	white	**10-2412.3139**	0,002
		28 VDC/14 mA	white	**10-2413.3139**	0,002
		230 VAC/3 mA	red	**10-2H25.2042**	0,002
		230 VAC/3 mA	yellow	**10-2H25.2044**	0,002
		230 VAC/3 mA	green	**10-2H25.2045**	0,002
		230 VAC/3 mA	blue	**10-2H25.2046**	0,002
		230 VAC/3 mA	white diffuse	**10-2H25.2049**	0,002
		130 VAC/5 mA	red	**10-2H24.2052**	0,002
		130 VAC/5 mA	yellow	**10-2H24.2054**	0,002
		130 VAC/5 mA	green	**10-2H24.2055**	0,002
		130 VAC/5 mA	blue	**10-2H24.2056**	0,002
		130 VAC/5 mA	white diffuse	**10-2H24.2059**	0,002
	8 chips	6 VDC/80 mA	red	**10-6406.3312**	0,002
			yellow	**10-6406.3314**	0,002
			green	**10-6406.3315**	0,002
		12 VDC/40 mA	red	**10-6409.3242**	0,002
			yellow	**10-6409.3244**	0,002
			green	**10-6409.3245**	0,002
		24 VDC/19 mA	red	**10-6412.3162**	0,002
			yellow	**10-6412.3164**	0,002
			green	**10-6412.3165**	0,002
		28 VDC/19 mA	red	**10-6413.3162**	0,002
			green	**10-6413.3165**	0,002
			yellow	**10-6413.3164**	0,002
		48 VDC/16 mA	red	**10-6419.3152**	0,002
			yellow	**10-6419.3154**	0,002
			green	**10-6419.3155**	0,002

diode block

	connection method	part no.	circuit drawing	technical drawing	kg
diode block 1 N 4007	ST	**704.942.5**	26	27	0,019

circuit drawings from page 131, technical drawings from page 122

lamp transformer

	operation voltage	connection method	part no.	circuit drawing	technical drawing	kg
lamp transformer for lamp rating 24 V/50 mA SEV class 2a, 1.2 VA, 50/60 Hz	115/24 VAC	ST	**704.970.3**	27	28	0,100
	230/24 VAC	ST	**704.970.4**	27	28	0,100
	400/24 VAC	ST	**704.970.5**	27	28	0,100
	440/24 VAC	ST	**704.970.6**	27	28	0,100

circuit drawings from page 131, technical drawings from page 122

capacitor block

	operation voltage	connection method	part no.	circuit drawing	technical drawing	kg
capacitor block for lamp voltage 130 V/20 mA, 50 Hz	230/130 VAC	ST	**704.942.0**	28	27	0,018

circuit drawings from page 131, technical drawings from page 122

resistor block

	operation voltage	connection method	part no.	circuit drawing	technical drawing	kg
resistor block for lamp rating 130 V/20 mA	230/130 V	ST	**704.941.0**	29	27	0,017
for lamp rating 60 V/33 mA	125/60 V	ST	**704.941.5**	29	27	0,006

circuit drawings from page 131, technical drawings from page 122

resistor diode block

	operation voltage	connection method	part no.	circuit drawing	technical drawing	kg
resistor diode block for lamp rating 130 V/20 mA	230/130 V	ST	**704.941.9**	30	27	0,017

circuit drawings from page 131, technical drawings from page 122

capacitor

	value	part no.	kg
capacitor use with 48 V/25 mA	0,33 µF	**700.003.0**	0,004

Wire in accordance with local electrical safety regulations.

series resistor

	value	part no.	kg
series resistor use with 130 V/20 mA lamp rating	230 V/130 V	**02-904.4**	0,004

Wire in accordance with local electrical safety regulations.

for emergency stop switch

label for emergency stop switch

	marking	part no.	kg
label for emergency stop switch yellow	ARRET D´URGENCE 60 mm dia.	**704.963.7**	0,011
	Emergency Stop 60 mm dia.	**704.963.6**	0,011
	Emergency Stop 90 mm dia.	**704.963.1**	0,011
	NOT-AUS 60 mm dia.	**704.963.5**	0,011
	NOT-AUS 90 mm dia.	**704.963.0**	0,011

protective shroud for emergency stop switch

	colour	part no.	kg
protective shroud for emergency stop switch of aluminium anodized use only for part no. 704.064.2 and 704.066.2	yellow	**704.927.4**	0,500
	natural	**704.927.0**	0,500

enclosure for emergency stop switch

	part no.	kg
enclosure for emergency stop switch colour yellow	**704.944.33**	140,000

assembling

anti-twisting ring for flush mounting

	part no.	kg
anti-twisting ring for flush mounting	**704.954.0**	0,002

reducing ring

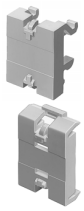
	colour	part no.	kg
reducing ring for mounting of pushbutton 22.5 mm dia. in mounting hole 30.5 mm dia.	natural anodized	**704.960.8**	0,004
	black anodized	**704.960.0**	0,004

mounting plate

	part no.	kg
mounting plate for separate mounting of lamp transformer, resistor block or capacitor block	**704.940.8**	0,006

snap-on base

	DIN mounting rail	part no.	kg
snap-on base for clipping, for seperate mounting of lamp transformer, resistor block or capacitor block	EN 50022	**704.941.1**	0,006
	EN 50035	**704.940.9**	0,006



reinforcement plate

for thin front panels and plastic case

	part no.	kg
reinforcement plate	**704.960.9**	0,014

lens remover

	part no.	kg
lens remover for pushbuttons for flush mounting	**700.006.0**	0,003

lamp remover

	part no.	kg
lamp remover front bezel bracket for flush mounting ATTENTION A switching process might be released when replacing the lamp!	**700.004.0**	0,003

mounting tool for indicator 704.02x.x

	part no.	kg
mounting tool for indicator 704.02x.x hinged, transparent, with means for sealing aluminium anodized	**700.005.0**	0,020

mounting tool for key insert switch

	part no.	kg
mounting tool for key insert switch	**704.990.0**	0,020

for indicator compact

indicator actuator for indicator compact

	colour	29 mm dia. Typ-Nr.	circuit drawing	kg
indicator actuator for indicator compact with series resistor for 110/125 V and incandescent lamp 60 V/33 mA	grey	**704.642.2**	1	0,009
with series resistor for 220/240 V and incandescent lamp 130 V/20 mA	grey	**704.642.1**	1	0,020
without built-in series resistor	grey	**704.642.0**	1	0,006

circuit drawings from page 131

lens cap round, plastic

	shape	lens cap	colour	29 mm dia. Typ-Nr.	kg
lens cap round, plastic	flat	transparent	blue	**704.603.6**	0,003
			colourless, clear	**704.603.7**	0,003
			yellow	**704.603.4**	0,003
			green	**704.603.5**	0,003
			red	**704.603.2**	0,003

marking cap for lens cap round

	marking cap	colour	29 mm dia. Typ-Nr.	kg
marking cap for lens cap round front bezel bracket for flush mounting	translucent, ribbed	white	**704.608.9**	0,002
for neon lamps and LED's	transparent, ribbed	colourless, clear	**704.608.7**	0,002

for indicator round, front illumination

indicator actuator round, front illumination

	colour	29 mm dia. Typ-Nr.	kg
indicator actuator round, front illumination	grey	**704.633.1**	0,020

lens round, plastic

	shape	lens	colour	29 mm dia. Typ-Nr.	kg
lens round, plastic	flat	transparent	blue	**704.602.6**	0,001
			colourless, clear	**704.602.7**	0,001
			yellow	**704.602.4**	0,001
			green	**704.602.5**	0,001
			red	**704.602.2**	0,001

marking foil for lens round plastic

	front shape	marking plate	colour	part no.	kg
marking foil for lens round plastic front bezel bracket for flush mounting	round	translucent	white	**704.609.9**	0,001
for LED	round	transparent, ribbed	colourless, clear	**704.609.7**	0,001

lens round raised plastic

	shape	lens	colour	29 mm dia. Typ-Nr.	kg
lens round raised plastic	flat	transparent	colourless, clear	**704.611.7**	0,002
			yellow	**704-611.4**	0,002
			green	**704.611.5**	0,002
			red	**704.611.2**	0,002

marking cap for lens round raised

	front shape	marking cap	colour	part no.	kg
marking cap for lens round raised front bezel bracket for flush mounting	round	translucent, ribbed	white	**704.610.9**	0,001
for neon lamps and LED's	round	transparent, ribbed	colourless, clear	**704.610.7**	0,001

front ring

	material	colour	29 mm dia. Typ-Nr.	kg
front ring	aluminium anodized	natural	**704.600.1**	0,005
		black	**704.600.1A**	0,005
	stainless steel	natural	**704.600.9**	0,006
	plastic	light grey	**704.600.6**	0,003
		black	**704.600.0**	0,003
		chromium-plated	**704.600.4**	0,003
front ring raised 16 mm	plastic	light grey	**704.600.7**	0,003

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

for indicator square, front illumination

indicator actuator square, front illumination

	colour	⧠ 30 x 30 mm Typ-Nr.	kg
indicator actuator square, front illumination	grey	**704.733.1**	0,020
	black	**704.733.0**	0,020

lens square, plastic

	shape	lens	colour	⧠ 30 x 30 mm Typ-Nr.	kg
lens square, plastic	flat	opaque	black	**704.702.0**	0,001
			white	**704.702.9**	0,001
		transparent	blue	**704.702.6**	0,001
			colourless, clear	**704.702.7**	0,001
			yellow	**704.702.4**	0,001
			green	**704.702.5**	0,001
			red	**704.702.2**	0,001

lens holder

for lens square

	lens holder	colour	part no.	kg
lens holder for neon lamps	transparent	clear	**704.709.7**	0,003
can be marked	translucent	white	**704.709.9**	0,003

marking foil for lens square

	front shape	colour	part no.	kg
marking foil for lens square can be hot pressed	square	colourless, clear	**704.706.7**	0,001

front bezel

	front shape	material	colour	part no.	kg
front bezel	square	plastic	grey	**704.701.6**	0,002
			black	**704.701.0**	0,002
			chromium-plated	**704.701.4**	0,002

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

for indicator round, full face illumination

indicator actuator round, full face illumination

	colour	Pictograph	circuit drawing	29 mm dia. Typ-Nr.	kg
indicator actuator round, full face illumination	grey			**704.630.1**	0,020

lens cap round, plastic

	shape	lens cap	colour	29 mm dia. Typ-Nr.	kg
lens cap round, plastic	flat	transparent	blue	**704.603.6**	0,003
			colourless, clear	**704.603.7**	0,003
			yellow	**704.603.4**	0,003
			green	**704.603.5**	0,003
			red	**704.603.2**	0,003

marking cap for lens cap round

	marking cap	colour	29 mm dia. Typ-Nr.	kg
marking cap for lens cap round front bezel bracket for flush mounting	translucent, ribbed	white	**704.608.9**	0,002
for neon lamps and LED's	transparent, ribbed	colourless, clear	**704.608.7**	0,002

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

for indicator square, full face illumination

indicator actuator square, full face illumination

	colour	⌀ 30 x 30 mm Typ-Nr.	kg
indicator actuator square, full face illumination	grey	**704.730.1**	0,005
	black	**704.730.0**	0,005

lens cap square, plastic

	shape	lens cap	colour	⌀ 30 x 30 mm Typ-Nr.	kg
lens cap square, plastic	flat	transparent	blue	**704.703.6**	0,003
			colourless, clear	**704.703.7**	0,003
			yellow	**704.703.4**	0,003
			green	**704.703.5**	0,003
			red	**704.703.2**	0,003

diffusor cap

for lens cap square

	colour	⌀ 30 x 30 mm Typ-Nr.	kg
diffusor cap for neon lamp	clear	**704.708.7**	0,004
can be marked	white	**704.708.9**	0,004

marking foil for lens square

	front shape	colour	part no.	kg
marking foil for lens square can be hot pressed	square	colourless, clear	**704.706.7**	0,001

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

for illuminated-/pushbutton round

illuminated-/pushbutton actuator round

	switching action	colour	29 mm dia. Typ-Nr.	kg
illuminated-/pushbutton actuator round	M	grey	**704.631.1**	0,009
	MA	grey	**704.632.1**	0,009

lens round, plastic

	shape	lens	colour	29 mm dia. Typ-Nr.	kg
lens round, plastic	flat	transparent	blue	**704.602.6**	0,001
			colourless, clear	**704.602.7**	0,001
			yellow	**704.602.4**	0,001
			green	**704.602.5**	0,001
			red	**704.602.2**	0,001

marking plate for lens round plastic

	front shape	marking plate	colour	part no.	kg
marking foil for lens round plastic front bezel bracket for flush mounting	round	translucent	white	**704.609.9**	0,001
for LED	round	transparent, ribbed	colourless, clear	**704.609.7**	0,001

lens round, metal

	shape	lens	colour	29 mm dia. Typ-Nr.	kg
lens round, metal for pushbuttons	flat	aluminium anodized	blue	**704.601.6**	0,001
			yellow	**704.601.4**	0,001
			green	**704.601.5**	0,001
			natural	**704.601.8**	0,001
			red	**704.601.2**	0,001
			black	**704.601.0**	0,001
		stainless steel	natural	**704.601.9**	0,001

lens metal round with window

	shape	lens	colour	part no.	kg
lens metal round with window	flat	aluminium anodized	natural	**704.601.81**	0,001
			black	**704.601.01**	0,001
		stainless steel	natural	**704.601.91**	0,001

mushroom-head cap

	mushroom	colour	40 mm dia. Typ-Nr.	kg
mushroom-head cap	transparent	blue	**704.614.6**	0,007
		yellow	**704.614.4**	0,007
		green	**704.614.5**	0,007
		clear	**704.614.7**	0,007
		red	**704.614.2**	0,007

marking plate for mushroom-head cap

	front shape	marking plate	colour	part no.	kg
marking plate for mushroom-head cap	round	translucent	white	**704.609.9**	0,001

front ring

	material	colour	29 mm dia. Typ-Nr.	kg
front ring	aluminium anodized	natural	**704.600.1**	0,005
		black	**704.600.1A**	0,005
	stainless steel	natural	**704.600.9**	0,006
	plastic	light grey	**704.600.6**	0,003
		black	**704.600.0**	0,003
		chromium-plated	**704.600.4**	0,003
front ring raised	plastic	light grey	**704.600.7**	0,003

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

for illuminated-/pushbutton square

illuminated-/pushbutton actuator square

	switching action	colour	⧻ 30 x 30 mm Typ-Nr.	kg
illuminated-/pushbutton actuator square	M	grey	**704.731.1**	0,008
		black	**704.731.0**	0,008
	MA	grey	**704.732.1**	0,008
		black	**704.732.0**	0,008

lens square, plastic

	shape	lens	colour	⧻ 30 x 30 mm Typ-Nr.	kg
lens square, plastic	flat	transparent	blue	**704.702.6**	0,001
			colourless, clear	**704.702.7**	0,001
			yellow	**704.702.4**	0,001
			green	**704.702.5**	0,001
			red	**704.702.2**	0,001

lens holder

for lens square

	lens holder	colour	part no.	kg
lens holder for neon lamps	transparent	clear	**704.709.7**	0,003
can be marked	translucent	white	**704.709.9**	0,003

marking foil for lens square

	front shape	colour	part no.	kg
marking foil for lens square can be hot pressed	square	colourless, clear	**704.706.7**	0,001

front bezel

	front shape	material	colour	part no.	kg
front bezel	square	plastic	grey	**704.701.6**	0,002
			black	**704.701.0**	0,002
			chromium-plated	**704.701.4**	0,002

bayonet flange

	material	part no.	kg
bayonet flange	plastic	**704.950.5**	0,015
	metal	**704.960.5**	0,025

lamp block

	connection method	part no.	circuit drawing	kg
lamp block		**704.950.1**	1	0,016
	ST	**704.950.0**	1	0,016

circuit drawings from page 131

snap-action switching element

switching system

switching system
The double-break, snap-action switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact.
The snap-action switching element is fitted with self-cleaning contacts.
Up to 3 switching elements can be snapped to each actuator.

material

material of contacts
hardsilver, gold/silver, silver/palladium (for aggressive atmospheres)

switching element
polycarbonate PC

mechanical characteristics

connection method
screw terminals
plug-in terminals 6.3 x 0.8 mm:
max. wire cross-section: 2 x 2.5 mm&
max. wire cross-section of stranded cable: 2 x 1.5 mm&.
For switches with plug-in terminals it is necessary to provide insulation sockets and to maintain a spacing of 65 mm between rows (mounting dimensions).

starting torque
screws at the mounting flange: max. 25 Ncm
screws at switching element: max. 50 Ncm

actuating force
11-20 N ± 1 N
depending on the number of switching elements, 1 to 3 elements

storage temperature
-40°C to + 85°C

mechanical life
pushbuttons:
maintained action 1.5 million cycles of operation
momentary action 3 million cycles of operation
selector switch:
maintained action 1.25 million cycles of operation
momentary action 2.5 million cycles of operation
emergency stop switch: >= 50´000 cycles of operation
key lock switch:
maintained action 25´000 cycles of operation
momentary action 50´000 cycles of operation"

rebound time
<= 3 ms

travel
5.8 ± 0.2 mm

resistance to shock
(single impacts, semi-sinusoidal)
30 g for 11 ms as per EN 60 947-5-1

resistance to vibration
(sinusoidal)
10 g at 10-2000 Hz, amplitude 0,75 mm as per EN 60 947-5-1

ambient air temperature
min. - 25°C (- 40° with restriction)
max. without illumination: + 80°C
max. with neon lamp + 80°C
max. with LED: + 80°C
max. with incandescent lamp: + 40°C
(as per DIN IEC 68-)

electrical characteristics

rated insulation voltage
500 VAC/600 VDC as per VDE 0100, group C

standards
The switches comply with the "Standards for low-voltage switching devices" EN 60 947-5-1

contact resistance
starting value <= 50 mΩ as per IEC 512-2-4

insulation resistance
>= 10 MΩ between open contacts at 500 VDC, as per IEC 512-2-10.

continuous thermal current I_{th_2}
10 A
The maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

switch rating max.
at switch rating AC for gold-, silver- and hard silver contacts service category AC-15 as per EN60947-5-1
(cos ϕ = 0.7)

voltage:	230 VAC	400 VAC	500 VAC
current:	6 A	4 A	2.5 A

at switch rating DC for gold-, silver- and hard silver contacts service category DC as per EN60947-5-1
L/R=100 ms at P>=50 W and
L/R=2 x P ms<50 W
WOP stands for switch rating in watt

voltage:	24 VDC	60 VDC	110 VDC
current:	10 A	3 A	1 A

switch rating min.

gold/silver contacts:

voltage:	5 VDC	24 VDC	110 VDC
current:	15 mA	5 mA	2 mA

hard silver contacts:

voltage:	24 VDC	110 VDC
current:	50 mA	10 mA

electric strength
5000 VAC, 50 Hz, 1 min. between all terminals and earth.

approvals

approvals
- SEV 500 VAC/10 A
- CSA 300 VAC
- UL 600 VAC HD
- German Navy SAK page no.3337 on request
- German Lloyd
- CE (declaration of conformity)
- CB

slow-make switching element

switching system

switching system
The double-break, slow-make switching element is equipped with one or two independent contact systems, acting as normally open or normally closed contact.
Slow-make contacts with forced action are ideal for high switch ratings. Up to 3 switching elements can be snapped to each actuator. Up to 3 switching elements can be snapped to each actuator.

material

material of contacts
hardsilver, gold/silver, silver/palladium (for aggressive atmospheres)

switching element
polycarbonate PC

mechanical characteristics

connection method
screw terminals
plug-in terminals 6.3 x 0.8 mm:
max. wire cross-section: 2 x 2.5 mm&
max. wire cross-section of stranded cable: 2 x 1.5 mm&.
For switches with plug-in terminals it is necessary to provide insulation sockets and to maintain a spacing of 65 mm between rows (mounting dimensions).

starting torque
screws at the mounting flange: max. 25 Ncm
screws at switching element: max. 50 Ncm

actuating force
13-36 N ± 1 N
depending on the number of switching elements, 1 to 3 elements

storage temperature
-40°C to + 85°C

mechanical life
pushbuttons:
maintained action 1.5 million cycles of operation
momentary action 3 million cycles of operation
selector switch:
maintained action 1.25 million cycles of operation
momentary action 2.5 million cycles of operation
emergency stop switch: >= 50´000 cycles of operation
key lock switch:
maintained action 25´000 cycles of operation
momentary action 50´000 cycles of operation"

travel
5.8 ± 0.2 mm

resistance to shock
(single impacts, semi-sinusoidal)
30 g for 11 ms as per EN 60 947-5-1

resistance to vibration
(sinusoidal)
10 g at 10-2000 Hz, amplitude 0,75 mm as per EN 60 947-5-1

rebound time
<= 1 ms

ambient air temperature
min. - 25°C (- 40° with restriction)
max. without illumination: + 80°C
max. with neon lamp + 80°C
max. with LED: + 80°C
max. with incandescent lamp: + 40°C

electrical characteristics

rated insulation voltage
500 VAC/600 VDC as per VDE 0100, group C

standards
The switches comply with the Rules for low-voltage switching devices" EN 60 947-5-1

contact resistance
starting value <= 50 mΩ as per IEC 512-2-4

insulation resistance
>= 100 MΩ between open contacts at 500 VDC, as per IEC 512-2-10.

continuous thermal current I_{th_2}
10 A
The maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

switch rating max.
at switch rating AC for gold-, silver- and hard silver contacts service category AC-15 as per EN60947-5-1
(cos ϕ = 0.7)

voltage:	230 VAC	400 VAC	500 VAC
current:	7 A	5 A	4 A

at switch rating DC for gold-, silver- and hard silver contacts service category DC as per EN60947-5-1
L/R=100 ms at P>=50 W and
L/R=2 x P ms<50 W
WOP stands for switch rating in watt

voltage:	24 VDC	60 VDC	110 VDC
current:	10 A	5 A	2.5 A

switch rating min.

gold/silver contacts:		
voltage	24 VDC	110 VDC
current:	10 mA	2 mA
hard silver contakts:		
voltage	24 VDC	110 VDC
current:	50 mA	10 mA

electric strength
5000 VAC, 50 Hz, 1 min. between all terminals and earth

approvals

approvals
- SEV 500 VAC/10 A
- CSA 300 VAC
- UL 600 VAC HD
- German Navy SAK page no.3337 on request
- German Lloyd
- CE (declaration of conformity)
- CB

buzzer

buzzer system

system
Piezo disc

material

alarm buzzer case
polyamide

front cap
plastic: polyamide
metal: nickel-plated brass
sea-water proof

mechanical characteristics

connection method
plug-in terminal 2.8 x 0.5 mm

operating temperature
-25°C to + 50°C

storage temperature
-25°C to + 50°C

degree of protection
IP 40 as per IEC 529 (flush mounting)
IP 65 (raised fitting) as per IEC 529

electrical characteristics

frequency (tone)
ca. 2.8 kHz continuous tone only

sound pressure
95 db (A) ± 8 at a distance of 0.1 m

operation voltage/current

operation voltage:	t24 VDC ± 10%
operation current:	<= 25 mA

actuator

material

front ring
polyamide, aluminium or chromium-plated nickel steel

mounting flange
polyethylene terephtalate

actuator case
polycarbonate, polyamide

mechanical characteristics

actuating force
snap-action switching element: 11-20 N ± 1 N
slow-make switching element: 13-36 N ± 1 N
depending on the number of snap-action elements

storage temperature
-30°C to + 85°C

mechanical life
pushbutton: >= 3 million operations
selector switch: >= 2.5 million operations
Emergency stop switch: >= 50´000 operations
keylock switch: >= 50´000 operations

travel
5.8 ± 0.2 mm

degree of protection
front as per IEC 529: IP 65

ambient air temperature
min. -25°C
max. without illumination: + 80°C
max. with neon lamp: + 80°C
max. with LED: + 80°C
max. with incandescent lamp: + 55°C

electrical characteristics

standards
The switches comply with the "Rules for low-voltage switching devices" EN 60 947-5-1

rotary selector switch element

mechanical characteristics

number of positions
1 to 8 positions max.

number of contacts
1 to 16 max. normally open contacts
(contact positioning to the rotary plan)

switching angle
Switching position a (9^{00}) is basic position
maintained action switching angle
12 x 30° max.
8 x 45° max.
6 x 60° max.
4 x 90° max.
momentary action with release 24°
(provide at the beginning or at the end)

standard type of Kraus + Naimer
- CG 4 hardsilver contacts with 1 µ gold layer
- CG 4-1 hardsilver contacts with 35 µ gold layer

electrical characteristics

DC 1, resistive circuits T = 1 ms
1 contact in line
permissible voltage 24 V 48 V 60 V 110 V 220 V 440 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A 0.3 A 0.2 A
2 contacts in line
permissible voltage 48 V 95 V 120 V 220 V 440 V 660 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A 0.3 A 0.2 A
3 contacts in line
permissible voltage 70 V 140 V 180 V 330 V 660 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A 0.3 A
4 contacts in line
permissible voltage 95 V 190 V 240 V 440 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A
5 contacts in line
permissible voltage 120 V 240 V 300 V 550 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A

6 contacts in line
permissible voltage 144 V 290 V 360 V 660 V
rated service current I 10.0 A 6.0 A 2.5 A 0.7 A
8 contacts in line
permissible voltage 190 V 350 V 450 V
rated service current I 10.0 A 6.0 A 2.5 A

inductive circuits T = 50 ms
1 contact in line
permissible voltage 24 V 30 V 48 V 60 V 110 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
2 contacts in line
permissible voltage 48 V 60 V 95 V 120 V 220 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
3 contacts in line
permissible voltage 72 V 90 V 140 V 180 V 330 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
4 contacts in line
permissible voltage 96 V 120 V 190 V 240 V 440 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
5 contacts in line
permissible voltage 120 V 150 V 240 V 300 V 550 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
6 contacts in line
permissible voltage 144 V 180 V 290 V 360 V 660 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A
8 contacts in line
permissible voltage 190 V 240 V 350 V 450 V
rated service current I 6.0 A 3.0 A 1.0 A 0.7 A 0.3 A

short-circuit-proof
max. insurance (gL-characteristics) 10 A
conditional rated short-circuit current 3 kA

rated service voltage

IEC	500 V
UL	300 V
SEV	380 V
CEE 24	380 V

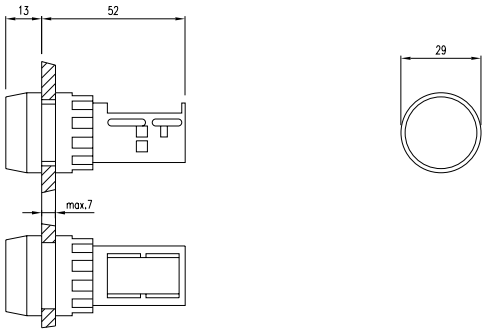
rated service current I_0
10 A
AC 21 switching of resistive load with low overload
AC 1 non or bad inductive load
AC 22 switching of mixed resistive and inductive load with low overload
AC 11 switching of magnetic drives, contactors, valves, draw-in magnet

thermic rated current Ith_2
Ith_2 = 10 A

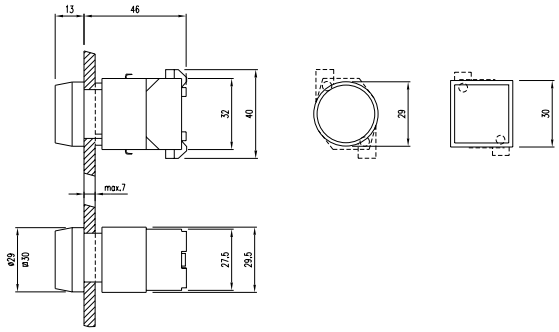
resistance/motor load
CEE 24 4/2 A

technical drawings

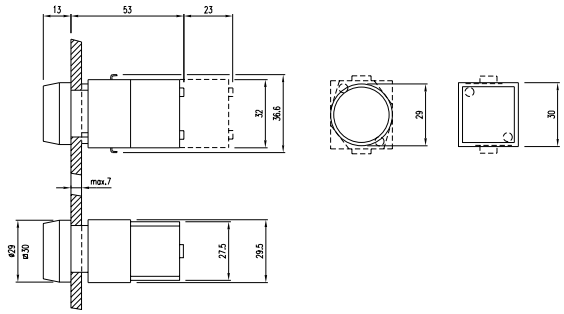
1 indicator compact full face illumination
page 72



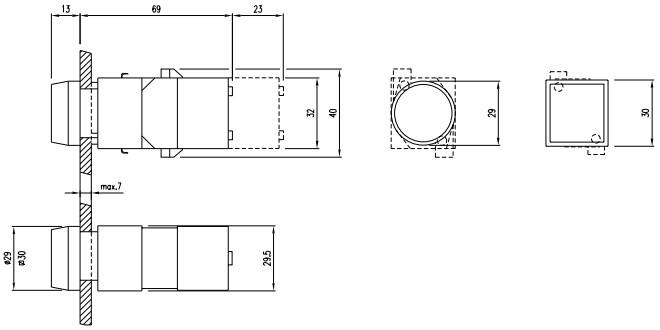
2 indicator/flasher full face illumination, indicator/flasher front illumination
page 73, 74



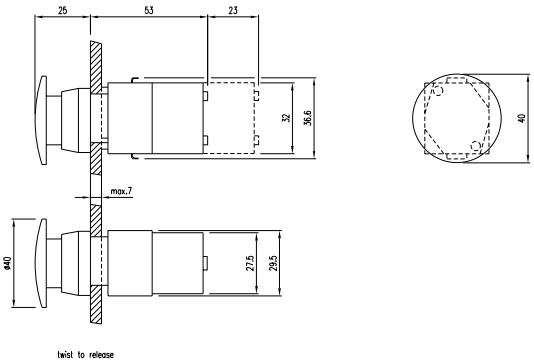
3 pushbutton actuator
page 76



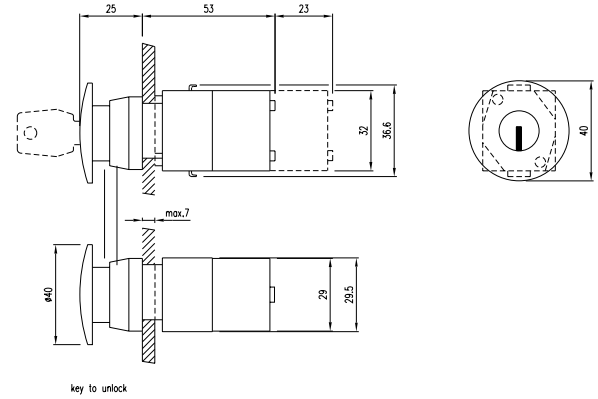
4 illuminated pushbutton actuator
page 78



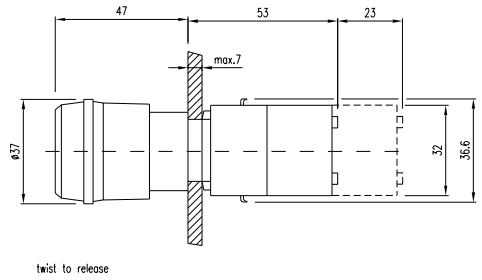
5 emergency stop switch actuator, pushbutton actuator with mushroom-head cap
page 79, 81



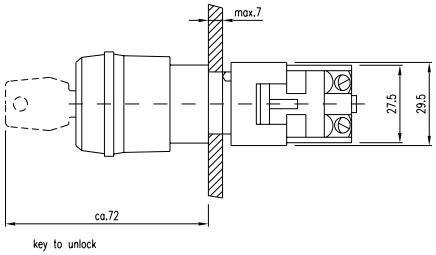
6 emergency stop switch actuator
page 79



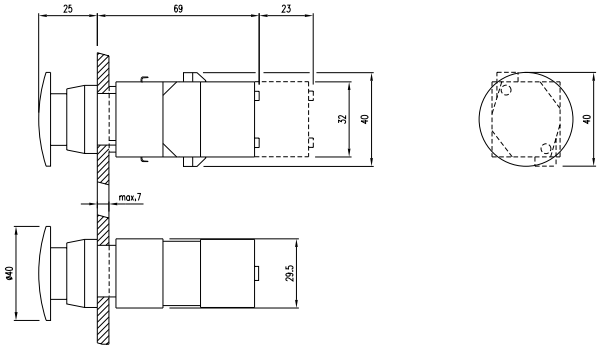
7 emergency stop switch actuator foolproof, EN 418
page 80



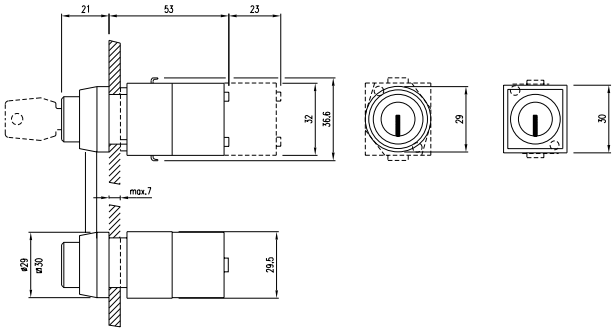
8 emergency stop switch actuator foolproof, EN 418
page 80



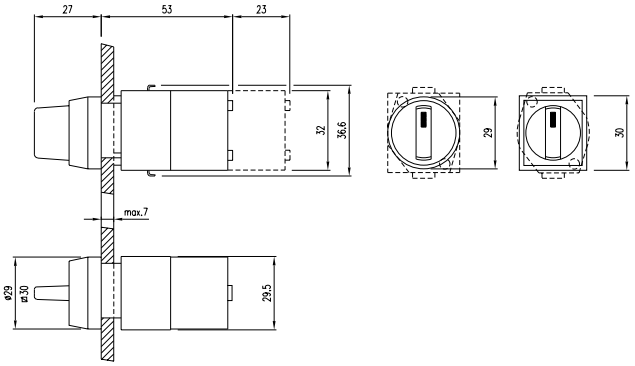
9 illuminated pushbutton actuator with mushroom-head cap
page 82



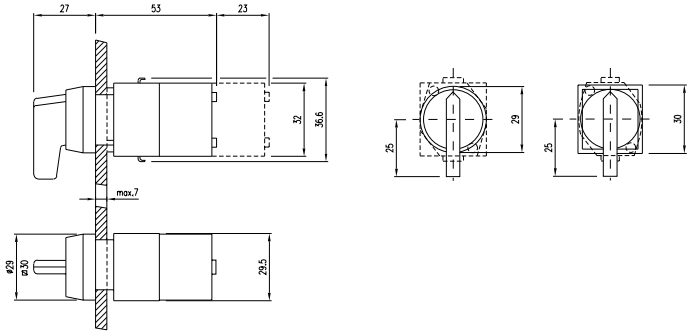
10 keylock switch actuator 2 positions, keylock switch actuator 3 positions
page 83, 84



11 selector switch actuator 2 positions, lever short, selector switch actuator 3 positions, short lever
page 85, 86

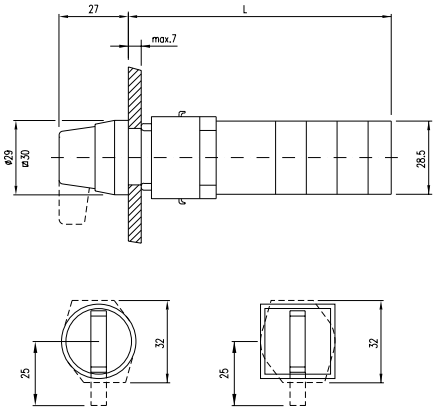


12 selector switch actuator 2 positions, lever long, selector switch actuator 3 positions, lever long
page 85, 86

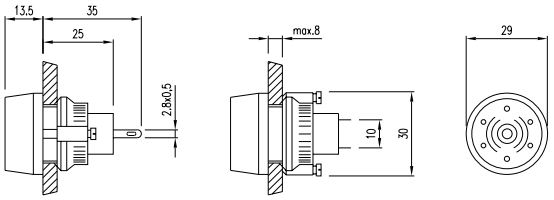


13 rotary selector switch actuator
page 88

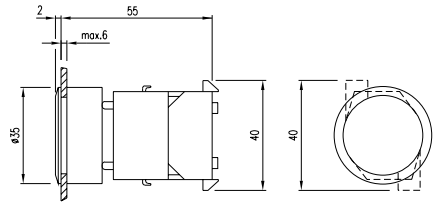
No. of elements	Depths L CG 4
1	66,5
2	78,5
3	90,5
4	102,5
5	114,5
6	126,5
7	138,5
8	150,5



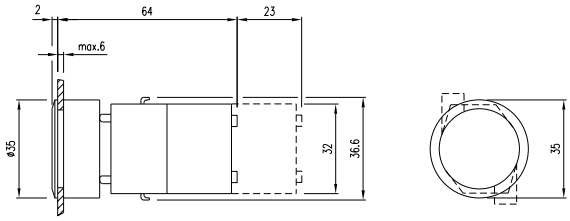
14 buzzer
page 88



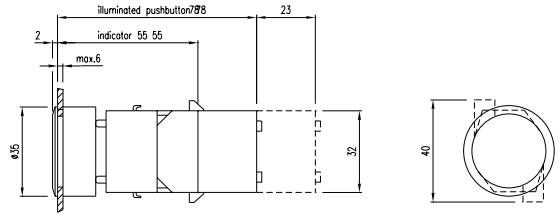
15 indicator/flasher for flush mounting
page 89



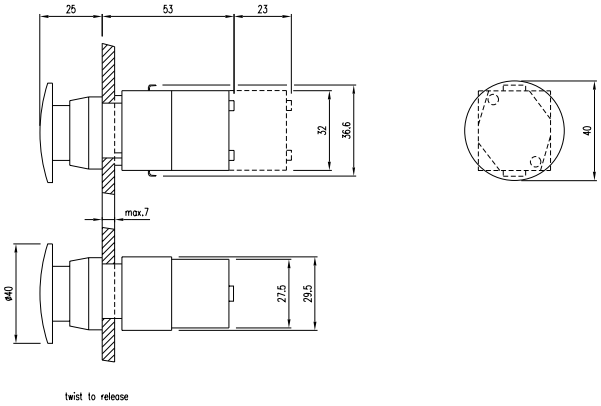
16 pushbutton actuator for flush mounting
page 90



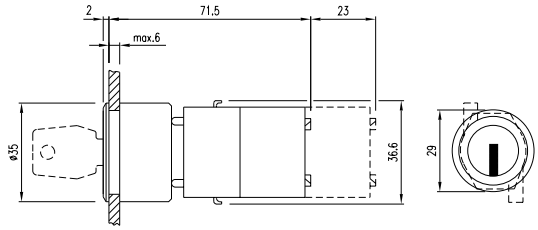
17 illuminated pushbutton actuator for flush mounting
page 91



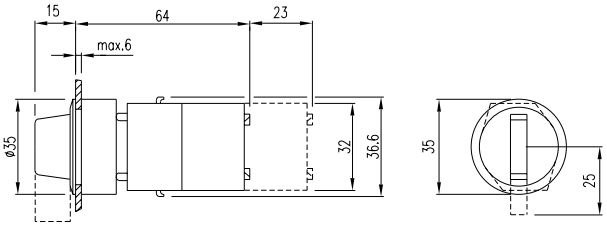
18 emergency stop switch actuator for flush mounting
page 92



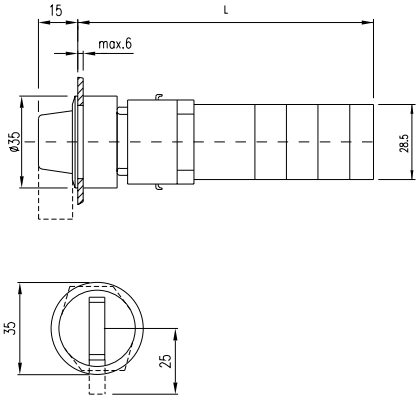
19 keylock switch actuator with 2 positions for flush mounting, keylock switch actuator 3 positions for flush mounting
page 92, 93



20 selector switch actuator 2 positions for flush mounting, short lever, selector switch actuator 2 positions for flush mounting, long lever, selector switch actuator 3 positions for flush mounting, lever short, selector switch actuator 3 positions for flush mounting, long lever
page 94, 94, 95, 96

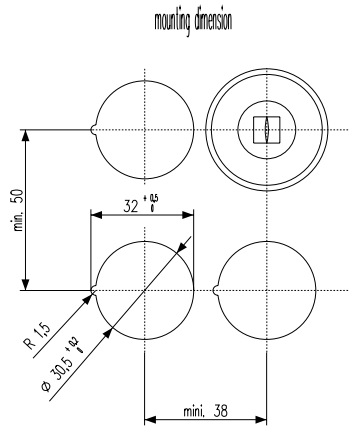


21 rotary selector switch actuator for flush mounting
page 96

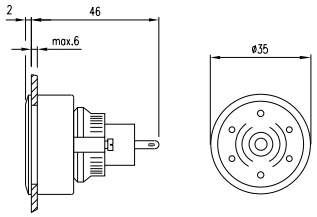


No. of elements	Depths L
	CG 4
1	78,5
2	90,5
3	102,5
4	114,5
5	126,5
6	138,5
7	150,5
8	162,5

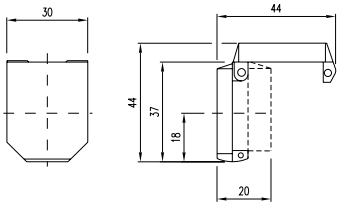
22 key insert switch actuator 2 positions for flush mounting, key insert switch actuator 3 positions for flush mounting
page 97, 97



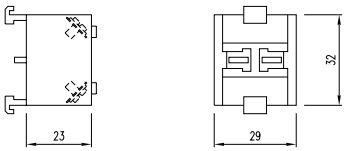
23 buzzer for flush mounting IP40
page 98



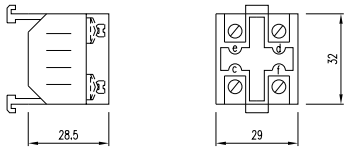
24 protective cover
page 99



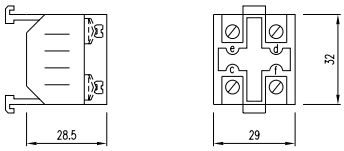
25 switching element, switching element for emergency stop switch
page 101, 102



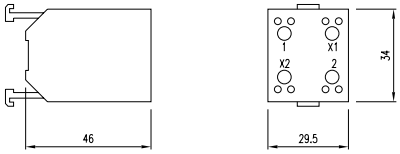
26 flasher element
page 102



27 diode block, capacitor block, resistor block, resistor diode block
page 104, 105, 105, 105

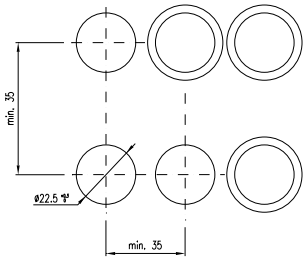


28 lamp transformer
page 105

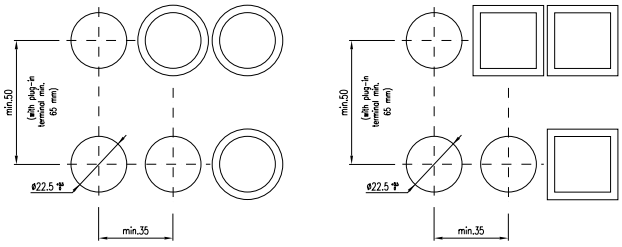


mounting dimensions

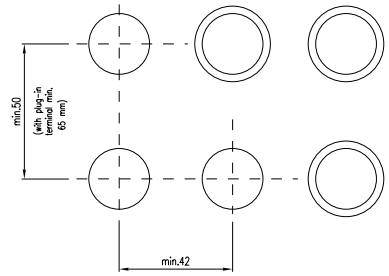
1 indicator compact full face illumination
page 72



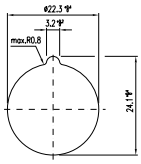
2 indicator/flasher full face illumination, indicator/flasher front illumination, pushbutton actuator, illuminated pushbutton actuator, key-lock switch actuator 2 positions, keylock switch actuator 3 positions, selector switch actuator 2 positions, lever short, selector switch actuator 3 positions, short lever, buzzer, blind plug
page 73, 74, 76, 78, 83, 84, 85, 86, 88, 100



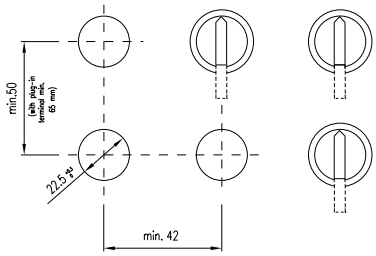
3 emergency stop switch actuator, pushbutton actuator with mushroom-head cap, illuminated pushbutton actuator with mushroom-head cap
page 79, 81, 82



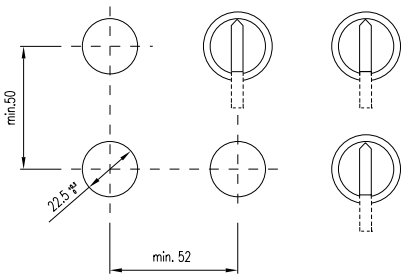
4 emergency stop switch actuator foolproof, EN 418
page 80



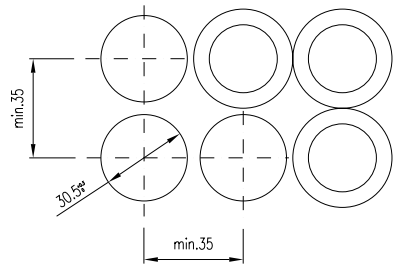
5 selector switch actuator 2 positions, lever long, selector switch actuator 3 positions, lever long
page 85, 87



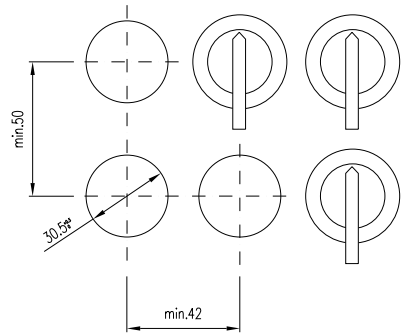
6 rotary selector switch actuator
page 88



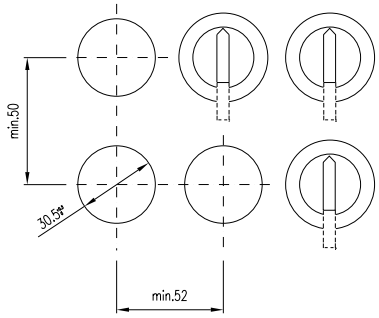
7 indicator/flasher for flush mounting, pushbutton actuator for flush mounting, illuminated pushbutton actuator for flush mounting, emergency stop switch actuator for flush mounting, keylock switch actuator with 2 positions for flush mounting, keylock switch actuator 3 positions for flush mounting, selector switch actuator 2 positions for flush mounting, short lever, selector switch actuator 2 positions for flush mounting, long lever, selector switch actuator 3 positions for flush mounting, lever short, key insert switch actuator 2 positions for flush mounting, key insert switch actuator 3 positions for flush mounting, buzzer for flush mounting IP40, front bezel-set for flush mounting
page 89, 90, 91, 92, 92, 93, 94, 94, 95, 97, 97, 98, 99



8 selector switch actuator 3 positions for flush mounting, long lever
page 96

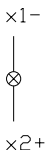


9 rotary selector switch actuator for flush mounting
page 96

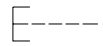


circuit drawings

1 indicator compact full face illumination, indicator/flasher full face illumination, indicator/flasher front illumination, indicator/flasher for flush mounting, indicator actuator for indicator compact, lamp block
page 72, 73, 74, 89, 109, 110

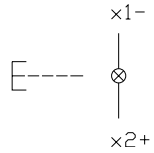


2 pushbutton actuator, pushbutton actuator with mushroom-head cap, pushbutton actuator for flush mounting
page 76, 81, 90

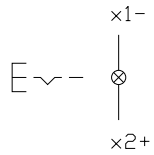


3 pushbutton actuator, pushbutton actuator with mushroom-head cap, pushbutton actuator for flush mounting
page 76, 81, 90

4 illuminated pushbutton actuator, illuminated pushbutton actuator with mushroom-head cap, illuminated pushbutton actuator for flush mounting
page 78, 82, 91



5 illuminated pushbutton actuator, illuminated pushbutton actuator with mushroom-head cap, illuminated pushbutton actuator for flush mounting
page 78, 82, 91



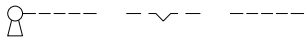
6 emergency stop switch actuator, emergency stop switch actuator foolproof, EN 418, emergency stop switch actuator for flush mounting
page 79, 80, 92

7 keylock switch actuator 2 positions, keylock switch actuator with 2 positions for flush mounting
page 83, 92

8 keylock switch actuator 2 positions, keylock switch actuator with 2 positions for flush mounting
page 83, 92

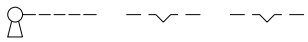
9 keylock switch actuator 3 positions, keylock switch actuator 3 positions for flush mounting
page 84, 93

10 keylock switch actuator 3 positions, keylock switch actuator 3 positions for flush mounting
page 84, 93



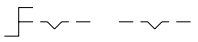
11 keylock switch actuator 3 positions, keylock switch actuator 3 positions for flush mounting
page 84, 93

12 keylock switch actuator 3 positions, keylock switch actuator 3 positions for flush mounting
page 84, 93



13 selector switch actuator 2 positions, lever short, selector switch actuator 2 positions, lever long, selector switch actuator 2 positions for flush mounting, short lever, selector switch actuator 2 positions for flush mounting, long lever
page 85, 85, 94, 94

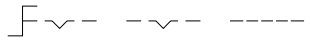
14 selector switch actuator 2 positions, lever short, selector switch actuator 2 positions, lever long, selector switch actuator 2 positions for flush mounting, short lever, selector switch actuator 2 positions for flush mounting, long lever
page 85, 85, 94, 94



15 selector switch actuator 3 positions, short lever, selector switch actuator 3 positions, lever long, selector switch actuator 3 positions for flush mounting, lever short
page 86, 87, 95

16 selector switch actuator 3 positions, short lever, selector switch actuator 3 positions, lever long, selector switch actuator 3 positions for flush mounting, lever short
page 86, 87, 95

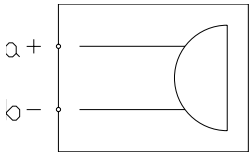
17 selector switch actuator 3 positions, short lever, selector switch actuator 3 positions, lever long, selector switch actuator 3 positions for flush mounting, lever short
page 86, 87, 95



18 selector switch actuator 3 positions, short lever
page 86

19 selector switch actuator 3 positions, short lever, selector switch actuator 3 positions, lever long, selector switch actuator 3 positions for flush mounting, lever short
page 86, 87, 95

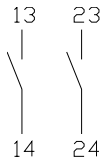
20 buzzer, buzzer for flush mounting IP40
page 88, 98



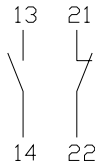
21 switching element, switching element for emergency stop switch
page 101, 102

22 switching element, switching element for emergency stop switch
page 101, 102,

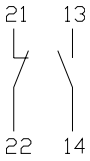
23 switching element, switching element for emergency stop switch
page 101, 102



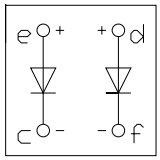
24 switching element, switching element for emergency stop switch
page 101, 102



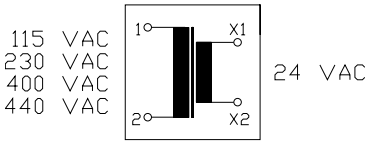
25 switching element, switching element for emergency stop switch
page 101, 102



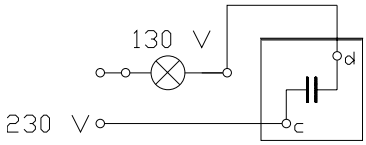
26 diode block
page 104



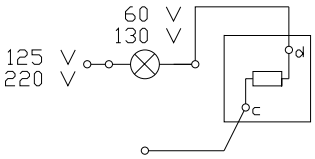
27 lamp transformer
page 105



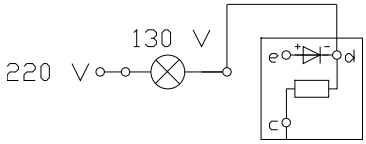
28 capacitor block
page 105



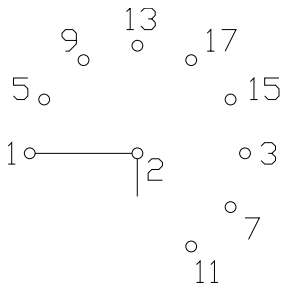
29 resistor block
page 105



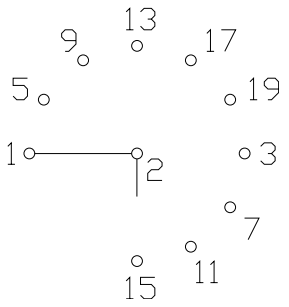
30 resistor diode block
page 105



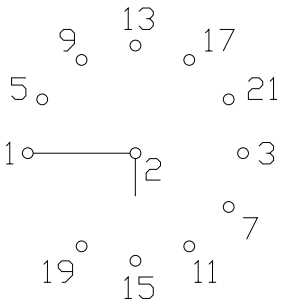
1 rotary selector switch element 30°
page 103



2 rotary selector switch element 30°
page 103

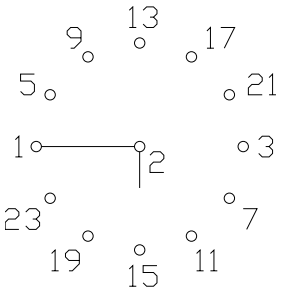


3 rotary selector switch element 30°
page 103

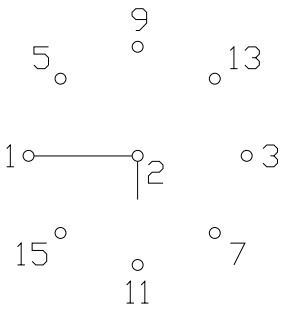


connecting diagrams

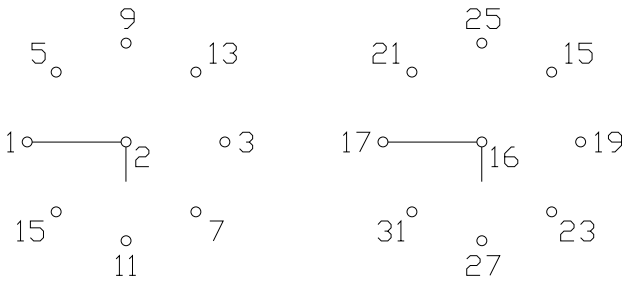
4 rotary selector switch element 30°
page 103



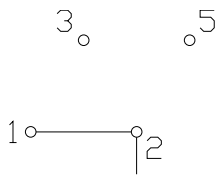
5 rotary selector switch element 45°
page 103



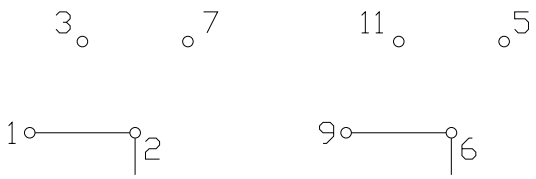
6 rotary selector switch element 45°
page 103



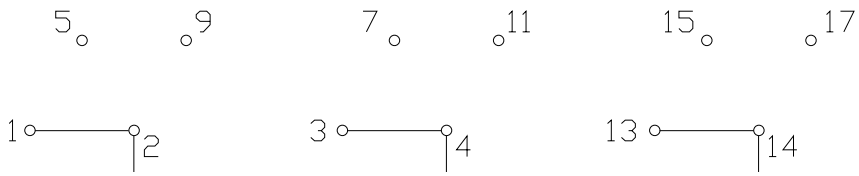
7 rotary selector switch element 60°
page 103



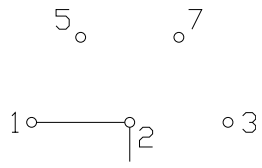
8 rotary selector switch element 60°
page 103



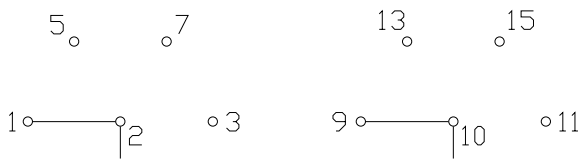
9 rotary selector switch element 60°
page 103



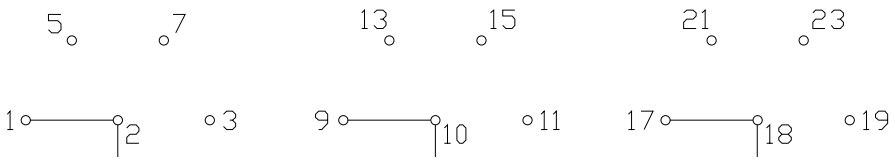
10 rotary selector switch element 60°
page 103



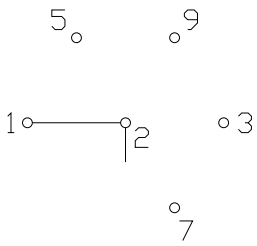
11 rotary selector switch element 60°
page 103



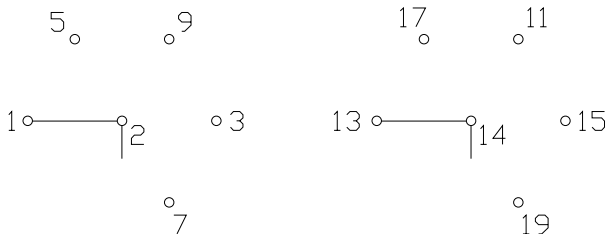
12 rotary selector switch element 60°
page 103



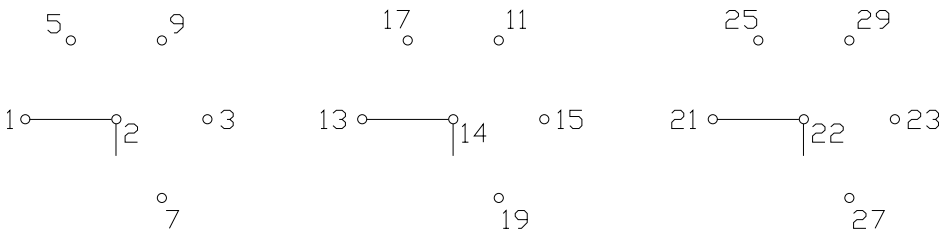
13 rotary selector switch element 60°
page 103



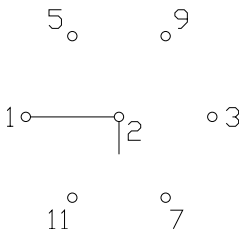
14 rotary selector switch element 60°
page 103



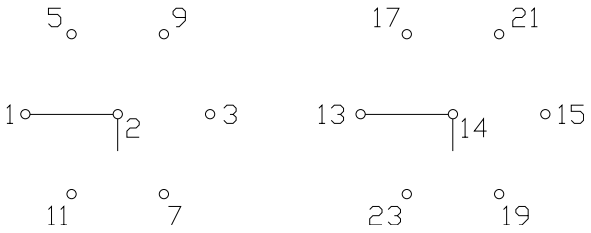
15 rotary selector switch element 60°
page 103



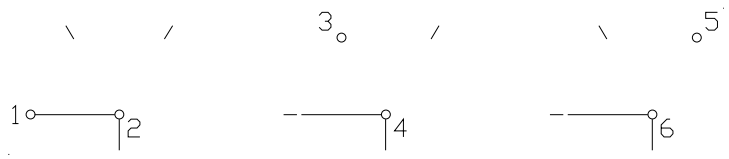
16 rotary selector switch element 60°
page 103



17 rotary selector switch element 60°
page 103



18 rotary selector switch element 60°
page 103

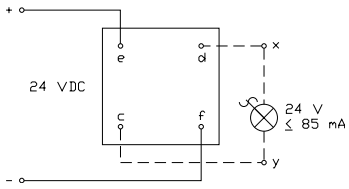


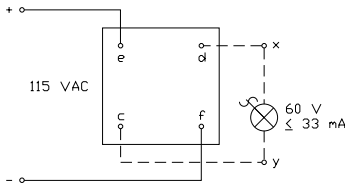
19 rotary selector switch element 60°
page 103

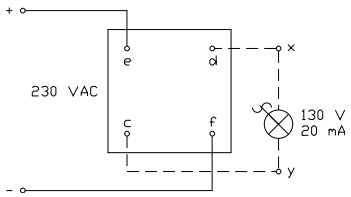
Flasher element

Applications

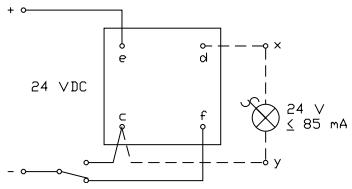
Circuit for flashing light
switchable to continuous light

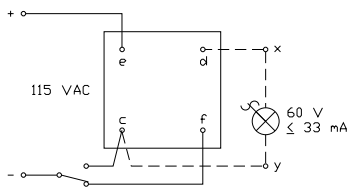


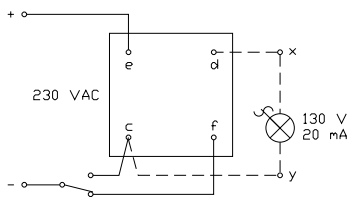




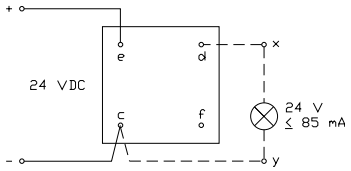
Circuit for flushing light

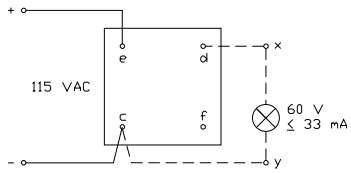


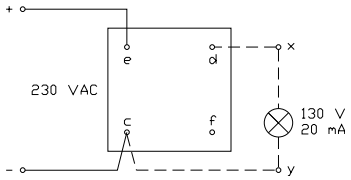




Circuit for continuous light







Important: Terminals c and f may not be in circuit at the same time!

1. Engraving

Typefaces

In addition to the most commonly used world languages (see DIN 1451) with close spacing, the following typefaces are available: Scandinavian, Slavian, Greek, Russian.

Coloured filling of engraving

Engraved marking caps and plates have the engraving filled with black or white. Letters to be engraved should be specified on a seperate order sheet.
(Obtainable from us on request.)

Special symbols

A list of the special symbols available can be supplied on request.

2. Hot stamping

Standard legends and ISO symbols are hot stamped. For large batches it is worth while to have the lettering produced by hot stamping.We will be pleased to advise you.

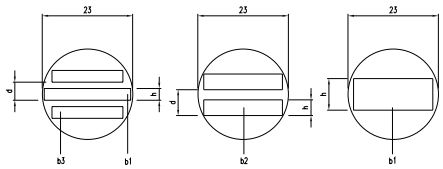
3. Film inserts (for square front only)

Instead of using engraving, the lenses can be fitted with transparent film inserts.

Film dimensions

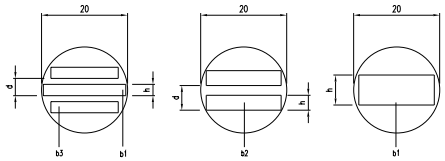
Indicator max. 24,5 x 24,5 mm
Illuminatrd pushbutton max. 21,5 x 21,5 mm

Indicator
Engraving of marking cap



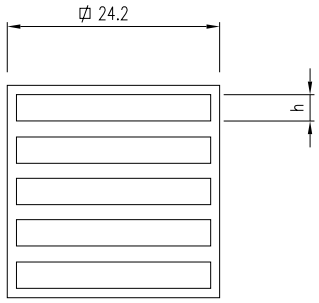
Height of letters h mm	Number of lines	Number of letters per line (approx.)			Line spacing b
		b1	b2	b3	
3	3	11	10	9	4,6
4	2	8	7	-	6,6
8	1	4	-	-	-

Pushbutton/illuminated pushbutton
Engraving
of marking cap



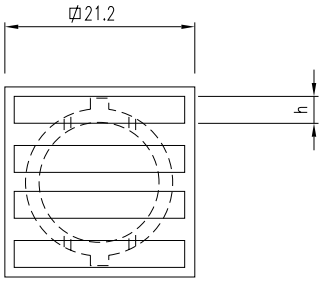
Height of letters h mm	Number of lines	Number of letters per line (approx.)			Line spacing b
		b1	b2	b3	
3	3	9	9	7	4,6
4	2	7	6	-	6,6
8	1	3	-	-	-

Indicator
Engraving of diffusor cap



Height of letters h mm	Thickness of letters	Number of lines	Number of capital letters	Number of small letters
2,5	0,4	6	13	14
3	0,4	5	11	12
4	0,5	4	8	8-9
5	0,5	3	6-7	7
6	0,6	2	5-6	6
8	0,6	1	4	4-5

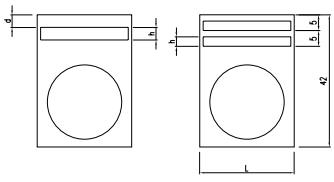
Pushbutton/illuminated pushbutton
Engraving of lens holder



Height of letters h mm	Thickness of letters	Number of lines	Number of capital letters	Number of small letters
2,5	0,4	5	9	9-10
3	0,4	4	7-8	8
4	0,5	3	5-6	6
5	0,5	2	4-5	4-5
6	0,6	2	3-4	4
8	0,6	1	2-3	3

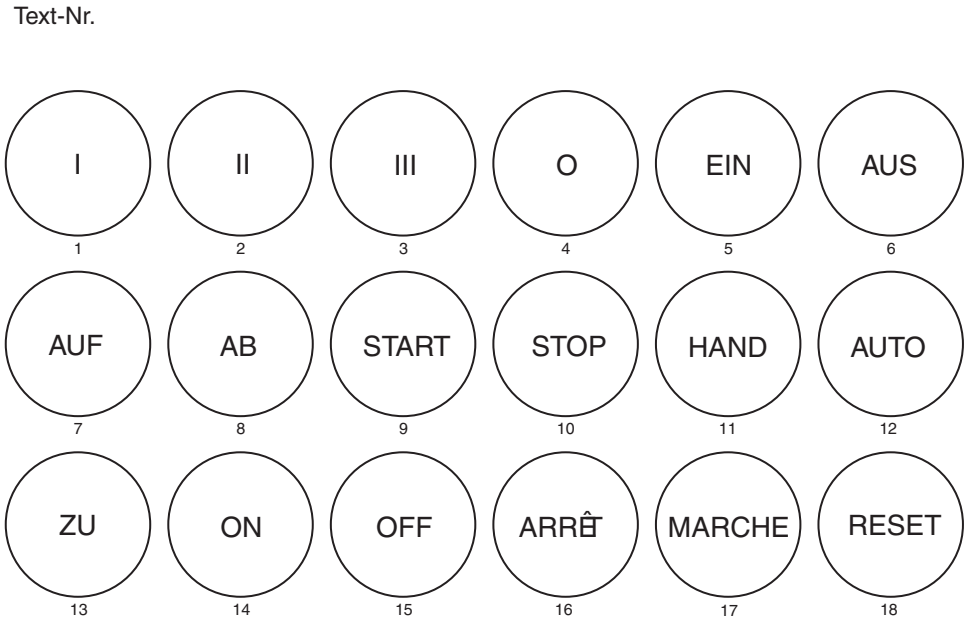
Caution! When engraving, make sure lens holder is positioned as shown.

Engraving of label



Height of letters h mm	Number of lines	Number of letters per line (approx.)		Line spacing
		L = 30 mm	L = 42 mm	
3	2	14	20	4,5
4	1	10	14	4
8	1	5	7	2

Standard texts for text plates



Symbols as per ISO R 369 for text plates

Symbol No.

 1	Direction of linear rectilinear motion (also for ⟶ ⇃⇂)	 13	Direction of spindle rotation	 29	Decrease of value (speed, for instance)	 49	Cooling pump
 2	Linear motion in in 2 directions (also for ⇂)	 14	One revolution	 30	Speed of planing cut	 50	Lubricant pump
 3	Interrupted linear motion (also for ← ⇃⇂)	 15	Number of revolutions per minute (spindle speed)	 31	Speef of turning cut	 51	Hydraulic system pump
 4	Limited linear motion(also for ← ⇃)	 16	Feed	 32	Speed of drilling cut	 52	Hydraulic motor
 5	Limited linear motion and return	 17	Feed per revolution	 33	Speed of milling cut (similar symbol fpr speed of grinding)	 53	Tracer
 6	Oscillating linear motion (continuous)	 18	Feed per minute	 34	Conventional milling	 61	Stepless regulation
 7	Direction of continuous rotation (right)	 19	Reduced feed	 35	Climb milling (down milling)	 62	Adjustable
 7a	Direction of continuous rotation (left)	 20	Rapid feed	 41	Electric motor	 63.1	Look or tighten
 8	Rotation in 2 directions	 21	Normal feed	 42	Rectangular work table or slide element	 63.2	Look or tighten
 9	Direction of interrupted rotation (right)	 22	Direction of feed (orientation not specified)	 43	Round work table or rotating element	 64.1	Unlock, unclamp
9a	Direction of interrupted rotation (left)	24	Transverse feed	44	Turning spindle	64.2	Chuck open
10	Limited rotation (right)	25	Vertical feed	45	Drilling spindle	65	Brake on
10a	Limited rotation (left)	26	Rapid traverse	46	Milling spindle	66	Brake off
11	Limited rotation and return	27	Threading	47	Grinding spindle	67	Automatic (or semi-automatic) cycle
12	Oscillating rotary movement (continuous)	28	Increase of value (speed, for instance)	48	Pump (general symbol)	68	Hand control

Symbols as per ISO R 369 for textplates

Symbol No.

EAO AG
Tannwaldstrasse 88
4601 Olten, Switzerland

E-mail info@eao.com
Website www.eao.com

Belgium
Phone +32/2 456 00 10
E-mail sales.ebl@eao.com

China
Phone +852/27 86 91 41
E-mail sales.ehk@eao.com.hk

France
Phone +33/1 64 43 37 37
E-mail sales.ese@eao.com

Germany
Phone +49/201 85 87 0
E-mail sales.ede@eao.com

Japan
Phone +81/3 5401 0953
E-mail sales.esj@eao.com

Netherlands
Phone +31/78 653 17 00
E-mail sales.enl@eao.com

Sweden
Phone +46/8 683 86 60
E-mail sales.esw@eao.com

Switzerland
Phone +41/62 388 95 00
E-mail sales.ech@eao.com

United Kingdom
Phone +44/1444 236000
E-mail sales.euk@eao.com

USA
Phone +1/203 877 4577
E-mail sales.eus@eao.com

Other Countries
Fax +41/62 296 21 62
E-mail info@eao.com
Website www.eao.com