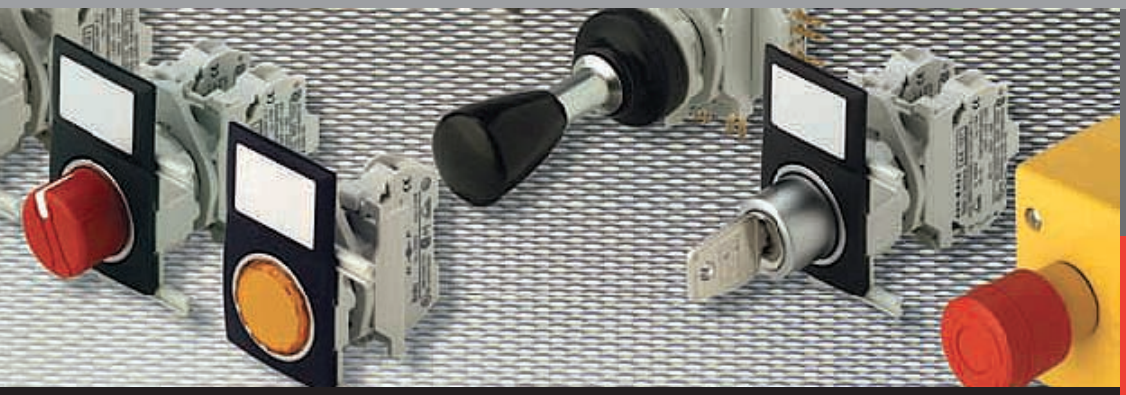
EAO – Your Expert Partner for
Human Machine Interfaces



EAO Product Information

Series 44

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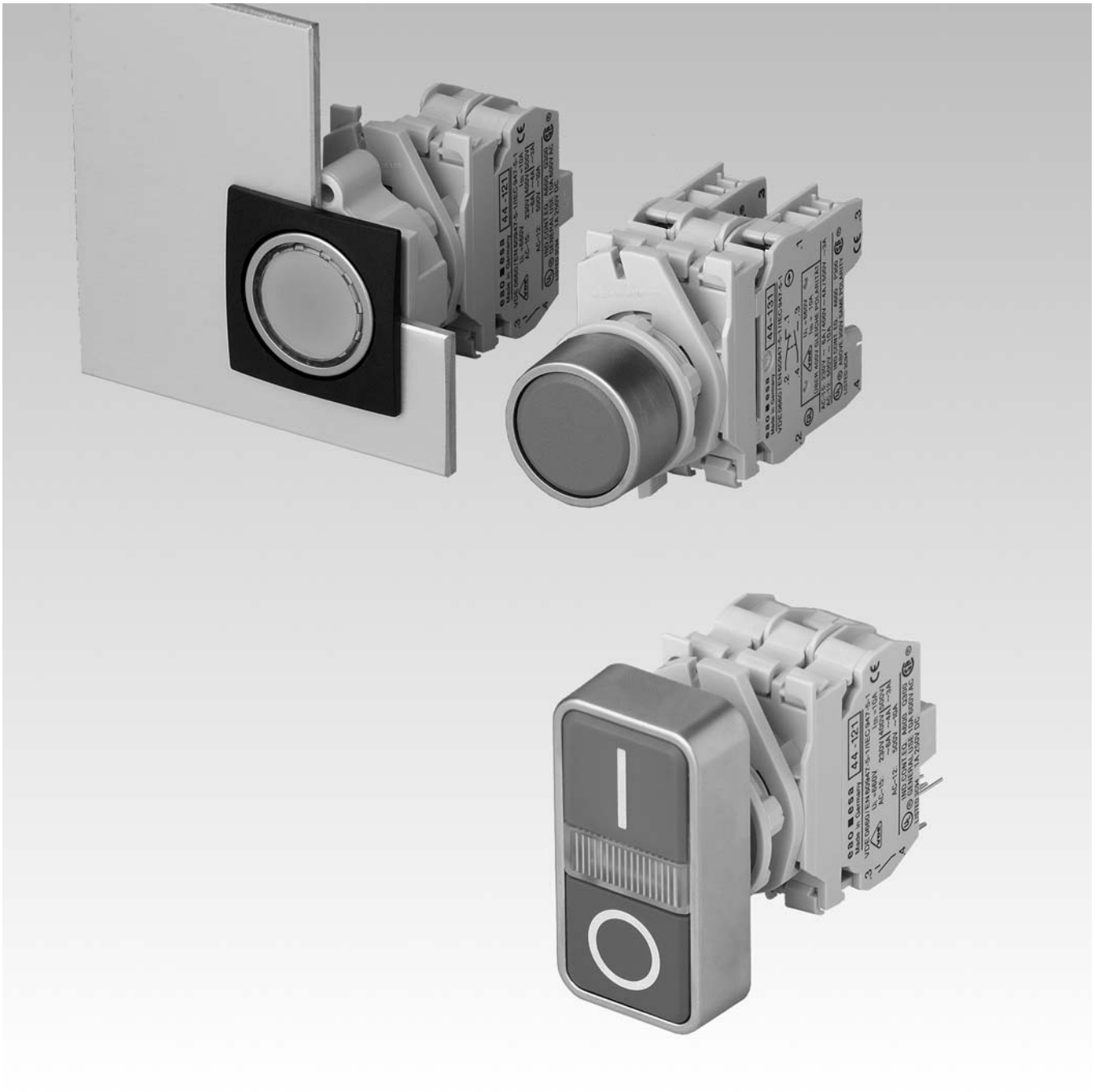
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Product Information

General notes
Series 44, a modular system of control units, offers the user numerous combinations with its wide range of actuator elements for pushbuttons, emergency-stop pushbuttons, rotary and keylock switches, interlocking pushbuttons, potentiometer drives, illuminated pushbuttons and indicators.
At the front the actuators feature an IP 65 protection class and can be supplied with mat grey or mat chrome front rings.
The switching elements can be supplied for fitting on front adaptors or for fitting on base adaptors, so that each control or indication point can be made to fit the requirements of the most varied conditions of usage, such as in industrial and mechanical engineering, marine and rail-vehicle construction, systems engineering and the construction of control mechanismus.
Series 44 is a high-quality product that has been manufactured and tested according to the most up-to-date international regulation and standards. Our products are marked with the CE sign in accordance with the directive for low voltages.

Design
The system consists of actuators, front or base adaptors, switching elements and lamp elements, pre-switching elements and lamp transformers. The connection between the actuator elements and the various function elements is done by means of a latch click-stop connection through the front adaptor for front attachment.
For base attachment the various function elements are click-stopped on to the base adaptor.
For pushbuttons with front attachment, further switching elements in the 2nd level can be click-stopped on to the 1st level of switching elements (tandem arrangement).

Mounting
The control pushbuttons and indicators of Series 44 are designed to be fitted in a mounting hole of 22.5 mm diameter in accordance with IEC 60947-5-1 and VDE 0660. The actuators can be inserted in mounting holes with or without recess for the anti-twisting device and are self-holding with means that they can be fitted quickly and easily in the front panel (one-person fitting).
When the actuator elements are installed in metallic front panels and housings, they should not be incorporated in the protection provision. When installed in insulated housing, the "protection insulation" provision is preserved.

Terminals
All function elements have shockproof screw terminals (finger safety in accordance with DIN VDE 0106, part 100 and VBG 4) and have openings to guide a screwdriver. When delivered, the screw terminals are open, thus guaranteeing safe and fast installation.
The lamp transformer has srew terminals as primary-terminal and as secondary connection connecting leads with multi-core cable ends.
The designation for terminal connections accords with DIN EN 50013.

Marking
The marking plate for illuminated pushbuttons, indicators or markable pushbuttons can be provided with pictograms conforming to ISO-R 369 or with lettering.
For further information about engraving, hot stamping and film inserts see part Marking.

Illumination
Incandescent lamps or Single-Chip LEDs with BA9s lampholder assure perfect illumination of the indicators and illuminated pushbuttons.
Luminosity and wave length scattering caused by the technology used in the LED manufacturing processes may lead to visual differences in our products.

Keylock switch
Standard lock with integrated cap.
Standard lock number is 9500. Without specifications for the lock number we supply standard number 9500.
For locks with defined lock number, add after the Typ-Nr. (code 01 ... 10). Further lock numbers on request.
Spare keys can be ordered by quoting Typ-Nr. 44-919.xx (please state the lock number).
Two keys are supplied with each keylock switch.

Specimen order

Indicator :

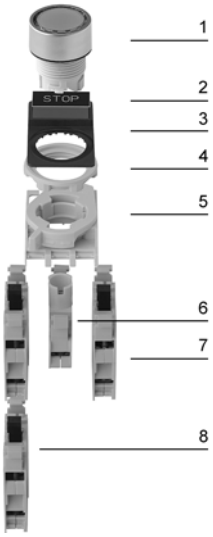
-	Indicator actuator, 28 mm dia. Full-face illumination Front ring plastic chrome Lens plastic red	44-750.22

Essential accessories :

-	Front adapter, front mounting, without marking	44-900
-	Lamp element, front mounting, socket BA9s	44-524
-	Single-Chip LED BA9s, 6 VDC, red	10-2506.1082

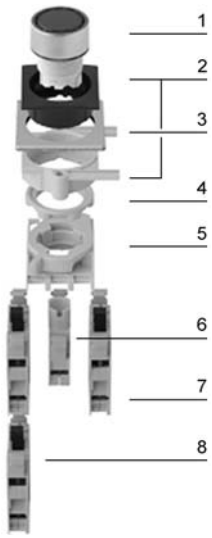
We reserve the right to modify technical data
All dimensions in mm

Illuminated pushbutton, front mounting, raised mounting



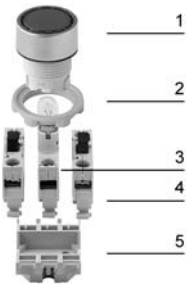
1 Actuator
2 Label for Label support
3 Label support
4 Fixing nut
5 Front adapter
6 Lamp element
7 Switching element 1. level
8 Switching element 2. level

Illuminated pushbutton, front mounting, flush mounting



1 Actuator
2 Front bezel set flush mounting
3 Front panel
4 Fixing nut
5 Front adapter
6 Lamp element
7 Switching element 1. level
8 Switching element 2. level

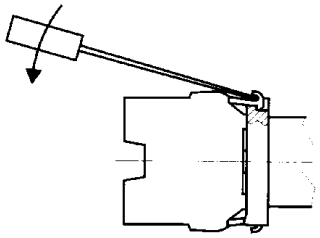
Illuminated pushbutton, base mounting (separated mounting), raised mounting



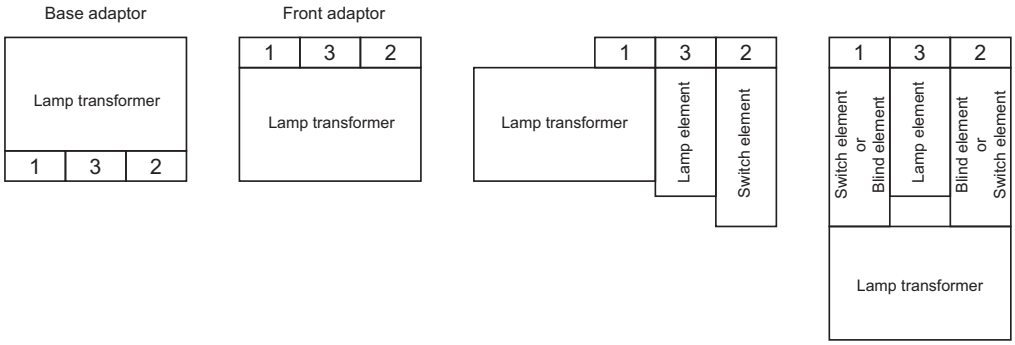
1 Actuator
2 Fixing nut
3 Lamp element
4 Switching element
5 Base adaptor

Dismantling function elements

To dismantle switching element, lamp element or lamp transformer, slightly lift the latching arm with the tip of a screwdriver.

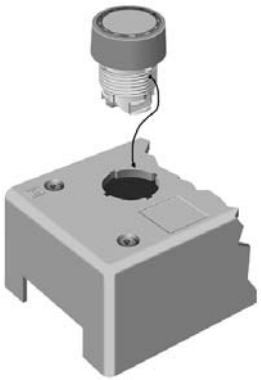


Mounting lamp transformer



Enclosure

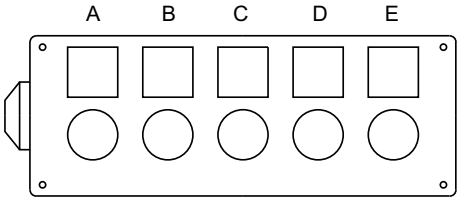
Mount the actuator so that the anti-twist device faces the square area next to the mounting hole.



Base adaptors are included in the enclosure.

In the ends of the enclosure are cable entries 22.5 mm dia., fitted with an inlet grommet at one end.
A second grommet is supplied in the enclosure. In addition, a spezial screw gland M20 can be supplied Typ-Nr. 44-956.

Openings designations:
A, B, C and D
opening A is nearest to the inlet grommet.



Indicator full-face illumination complete

Essential Accessories:

Single-LED page 45

	Front protection	Terminals	Front ring	Lens cap	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Indicator full-face illumination complete non-markable	IP 65	ST	Plastic matt-chrome	Plastic colourless	**44-750.27.000**	1	13	3	0.025
				Plastic green	**44-750.25.000**	1	13	3	0.025
				Plastic red	**44-750.22.000**	1	13	3	0.025
				Plastic yellow	**44-750.24.000**	1	13	3	0.025

Terminals: ST = Screw terminal

Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Indicator front illumination complete

Essential Accessories:

Single-LED page 45

	Front protection	Terminals	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Indicator front illumination complete markable with text plate translucent white	IP 65	ST	Plastic matt-chrome	Plastic green	**44-751.25.000**	1	13	3	0.025
				Plastic red	**44-751.22.000**	1	13	3	0.025
				Plastic white	**44-751.29.000**	1	13	3	0.025
				Plastic yellow	**44-751.24.000**	1	13	3	0.025

Terminals: ST = Screw terminal

Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Pushbutton complete

	Front protection	Terminals	Switching action	Contacts	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Pushbutton complete non-markable	IP 65	ST	MA	1 NC + 1 NO	Plastic matt-chrome	Plastic black	**44-702.20.100**	1	14	9	0.037
				1 NO	Plastic matt-chrome	Plastic green	**44-702.25.010**	1	14	7	0.030
			M	1 NC	Plastic matt-chrome	Plastic red	**44-701.22.001**	1	14	21	0.030
				1 NC + 1 NO	Plastic matt-chrome	Plastic black	**44-701.20.100**	1	14	25	0.037
				1 NO	Plastic matt-chrome	Plastic green	**44-701.25.010**	1	14	23	0.030
						Plastic white	**44-701.29.010**	1	14	23	0.030
						Plastic yellow	**44-701.24.010**	1	14	23	0.030

Terminals: ST = Screw terminal
Switching action: MA = Maintained action, M = Momentary action
Contacts: NC = Normally closed, NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Illuminated pushbutton complete

Essential Accessories:
Single-LED page 45

	Front protection	Terminals	Switching action	Contacts	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Illuminated pushbutton complete markable	IP 65	ST	MA	1 NC + 1 NO	Plastic matt-chrome	Plastic white	**44-747.29.100**	1	15	10	0.047
				1 NO	Plastic matt-chrome	Plastic green	**44-747.25.010**	1	15	8	0.040
			M	1 NC	Plastic matt-chrome	Plastic red	**44-746.22.001**	1	15	22	0.040
				1 NC + 1 NO	Plastic matt-chrome	Plastic white	**44-746.29.100**	1	15	26	0.047
				1 NO	Plastic matt-chrome	Plastic green	**44-746.25.010**	1	15	24	0.040
						Plastic yellow	**44-746.24.010**	1	15	24	0.040

Terminals: ST = Screw terminal
Switching action: MA = Maintained action, M = Momentary action
Contacts: NC = Normally closed, NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Emergency-stop pusbutton, foolproof EN IEC 60947-5-5, complete

Application as per DIN EN ISO 13850 and EN 60204-1

	Front protection	Terminals	Switching action	Contacts	Mushroom had cap	Ø 37 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Emergency-stop pusbutton, foolproof EN IEC 60947-5-5, complete Shaft yellow Key to unlock anti-clockwise Standard lock 9500	IP 65	ST	MA	1 NC	Plastic red	**44-713.001**	2	29	37	0.083
Shaft yellow Twist to unlock anti-clockwise	IP 65	ST	MA	1 NC	Plastic red	**44-712.001**	2	29	37	0.047

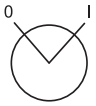
Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Stop pushbutton, complete

	Front protection	Terminals	Switching action	Contacts	Mushroom had cap	Ø 50 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Stop pushbutton, complete Shaft yellow Twist to unlock anti-clockwise	IP 65	ST	MA	1 NC	Plastic red	**44-710.001**	2	28	37	0.057

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

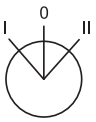
Key lock switch 2 positions complete



	Front protection	Terminals	Switching action	Contacts	Key remove	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Key lock switch 2 positions complete Position 0 : Basic position Position I : Maintained action Standard lock 9500	IP 65	ST	MA	1 NC + 1 NO	0	Plastic matt-chrome	**44-730.21.100**	1	18	33	0.075
					0 + I	Plastic matt-chrome	**44-730.22.100**	1	18	33	0.075

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed, NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

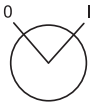
Key lock switch 3 positions complete



	Front protection	Terminals	Switching action	Contacts	Key remove	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Key lock switch 3 positions complete Position 0 : Basic position Position I + II : Maintained action Standard lock 9500	IP 65	ST	MA-0-MA	2 NO	I - 0 - II	Plastic matt-chrome	**44-734.25.020**	1	27	34	0.078

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

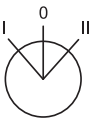
Selector switch 2 positions complete



	Front protection	Terminals	Switching action	Contacts	Lever	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Selector switch 2 positions complete Position 0 : Basic position Position I : Maintained action	IP 65	ST	MA	1 NC + 1 NO	Plastic black	Plastic matt-chrome	**44-720.20.100**	1	16	17	0.045

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed, NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Selector switch 3 positions complete



	Front protection	Terminals	Switching action	Contacts	Lever	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Selector switch 3 positions complete Position 0 : Basic position Position I + II : Maintained action	IP 65	ST	MA-0-MA	2 NO	Plastic black	Plastic matt-chrome	**44-724.20.020**	1	17	18	0.048

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NO = Normally open
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Control switch

	Front protection	Terminals	Switching action	Contacts	Lever	Ø 22 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Control switch 2 positions without latch position	IP 65	S1	M	2 NC + 2 NO	Plastic black	**44-800.2**	1	4	10	40	0.080
4 positions without latch position	IP 65	S1	M	4 NC + 4 NO	Plastic black	**44-800.4**	2	4	10	41	0.085
8 positions without latch position and lever guidance (omni directional)	IP 65	S1	M	4 NC + 4 NO	Plastic black	**44-800.8**	2	4	10	42	0.085

Caution!
With flat receptacle, VDE 0630 and SEV standards specify use of insulating sleeve No. 280-0010-00.
Terminals: S1 = Soldering terminal (also pluggable 2.8 x 0.5 mm)
Switching action: M = Momentary action
Contacts: NC = Normally closed, NO = Normally open
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Indicator actuator full-face illumination

Essential Accessories:

- Front adapter, front mounting page 42
- Lamp element, front mounting page 43
- Single-LED page 45

	Front protection	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	kg
Indicator actuator full-face illumination non-markable	IP 65	Plastic matt-chrome	Plastic blue	**44-750.26**	1	19	0.008
			Plastic colourless	**44-750.27**	1	19	0.008
			Plastic green	**44-750.25**	1	19	0.008
			Plastic red	**44-750.22**	1	19	0.008
			Plastic yellow	**44-750.24**	1	19	0.008
		Plastic matt-grey	Plastic blue	**44-750.66**	1	19	0.008
			Plastic colourless	**44-750.67**	1	19	0.008
			Plastic green	**44-750.65**	1	19	0.008
			Plastic red	**44-750.62**	1	19	0.008
			Plastic yellow	**44-750.64**	1	19	0.008

Mounting dimensions from page 58, Technical drawing from page 59

Indicator actuator front illumination

Essential Accessories:

- Base adaptor page 43
- Front adapter, front mounting page 42
- Lamp element, front mounting page 43
- Single-LED page 45

	Front protection	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	kg
Indicator actuator front illumination markable with text plate translucent white	IP 65	Plastic matt-chrome	Plastic blue	**44-751.26**	1	22	0.007
			Plastic green	**44-751.25**	1	22	0.007
			Plastic red	**44-751.22**	1	22	0.007
			Plastic white	**44-751.29**	1	22	0.007
			Plastic yellow	**44-751.24**	1	22	0.007
		Plastic matt-grey	Plastic blue	**44-751.66**	1	22	0.007
			Plastic green	**44-751.65**	1	22	0.007
			Plastic red	**44-751.62**	1	22	0.007
			Plastic white	**44-751.69**	1	22	0.007
			Plastic yellow	**44-751.64**	1	22	0.007

Mounting dimensions from page 58, Technical drawing from page 59

Pushbutton actuator



Essential Accessories:

- Base adaptor page 43
- Front adapter, front mounting page 42
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Lens mounting type	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Pushbutton actuator non-markable	IP 65	M	level with bezel	Plastic matt-chrome	Plastic black	**44-701.20**	1	20	2	0.013
					Plastic blue	**44-701.26**	1	20	2	0.013
					Plastic green	**44-701.25**	1	20	2	0.013
					Plastic red	**44-701.22**	1	20	2	0.013
					Plastic white	**44-701.29**	1	20	2	0.013
					Plastic yellow	**44-701.24**	1	20	2	0.013
				Plastic matt-grey	Plastic black	**44-701.60**	1	20	2	0.013
					Plastic blue	**44-701.66**	1	20	2	0.013
					Plastic green	**44-701.65**	1	20	2	0.013
					Plastic red	**44-701.62**	1	20	2	0.013
					Plastic white	**44-701.69**	1	20	2	0.013
					Plastic yellow	**44-701.64**	1	20	2	0.013
			lower than bezel	Plastic matt-chrome	Plastic black	**44-704.20**	1	20	2	0.015
					Plastic blue	**44-704.26**	1	20	2	0.015
					Plastic green	**44-704.25**	1	20	2	0.015
					Plastic red	**44-704.22**	1	20	2	0.015
					Plastic white	**44-704.29**	1	20	2	0.015
					Plastic yellow	**44-704.24**	1	20	2	0.015
				Plastic matt-grey	Plastic black	**44-704.60**	1	20	2	0.015
					Plastic blue	**44-704.66**	1	20	2	0.015
					Plastic green	**44-704.65**	1	20	2	0.015
					Plastic red	**44-704.62**	1	20	2	0.015
					Plastic white	**44-704.69**	1	20	2	0.015
					Plastic yellow	**44-704.64**	1	20	2	0.015
			raised above bezel	Plastic matt-chrome	Plastic black	**44-703.20**	1	20	2	0.015
					Plastic blue	**44-703.26**	1	20	2	0.015
					Plastic green	**44-703.25**	1	20	2	0.015
					Plastic red	**44-703.22**	1	20	2	0.015
					Plastic white	**44-703.29**	1	20	2	0.015
					Plastic yellow	**44-703.24**	1	20	2	0.015
				Plastic matt-grey	Plastic black	**44-703.60**	1	20	2	0.015
					Plastic blue	**44-703.66**	1	20	2	0.015
					Plastic green	**44-703.65**	1	20	2	0.015
					Plastic red	**44-703.62**	1	20	2	0.015
					Plastic white	**44-703.69**	1	20	2	0.015
					Plastic yellow	**44-703.64**	1	20	2	0.015

Continuation see next page

Continued from previous page

	Front protection	Switching action	Lens mounting type	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
non-markable up to 3 Switching elements max.	IP 65	MA	level with bezel	Plastic matt-chrome	Plastic black	**44-702.20**	1	20	1	0.013
					Plastic blue	**44-702.26**	1	20	1	0.013
					Plastic green	**44-702.25**	1	20	1	0.013
					Plastic red	**44-702.22**	1	20	1	0.013
					Plastic white	**44-702.29**	1	20	1	0.013
					Plastic yellow	**44-702.24**	1	20	1	0.013
				Plastic matt-grey	Plastic black	**44-702.60**	1	20	1	0.013
					Plastic blue	**44-702.66**	1	20	1	0.013
					Plastic green	**44-702.65**	1	20	1	0.013
					Plastic red	**44-702.62**	1	20	1	0.013
					Plastic white	**44-702.69**	1	20	1	0.013
					Plastic yellow	**44-702.64**	1	20	1	0.013
			lower than bezel	Plastic matt-chrome	Plastic black	**44-706.20**	1	20	1	0.015
					Plastic blue	**44-706.26**	1	20	1	0.015
					Plastic green	**44-706.25**	1	20	1	0.015
					Plastic red	**44-706.22**	1	20	1	0.015
					Plastic white	**44-706.29**	1	20	1	0.015
					Plastic yellow	**44-706.24**	1	20	1	0.015
				Plastic matt-grey	Plastic black	**44-706.60**	1	20	1	0.015
					Plastic blue	**44-706.66**	1	20	1	0.015
					Plastic green	**44-706.65**	1	20	1	0.015
					Plastic red	**44-706.62**	1	20	1	0.015
					Plastic white	**44-706.69**	1	20	1	0.015
					Plastic yellow	**44-706.64**	1	20	1	0.015
			raised above bezel	Plastic matt-chrome	Plastic black	**44-705.20**	1	20	1	0.015
					Plastic blue	**44-705.26**	1	20	1	0.015
					Plastic green	**44-705.25**	1	20	1	0.015
					Plastic red	**44-705.22**	1	20	1	0.015
					Plastic white	**44-705.29**	1	20	1	0.015
					Plastic yellow	**44-705.24**	1	20	1	0.015
				Plastic matt-grey	Plastic black	**44-705.60**	1	20	1	0.015
					Plastic blue	**44-705.66**	1	20	1	0.015
					Plastic green	**44-705.65**	1	20	1	0.015
					Plastic red	**44-705.62**	1	20	1	0.015
					Plastic white	**44-705.69**	1	20	1	0.015
					Plastic yellow	**44-705.64**	1	20	1	0.015

Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Pushbutton actuator markable

Essential Accessories:

- Front adapter, front mounting page 42
- Marking plate for Lens page 38
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Lens	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Pushbutton actuator markable Colour of lens is determinded by the colour of text plate	IP 65	M	Plastic colourless	Plastic matt-chrome	**44-701.27**	1	23	2	0.012
				Plastic matt-grey	**44-701.67**	1	23	2	0.012
Colour of lens is determinded by the colour of text plate, up to 3 Switching elements max.	IP 65	MA	Plastic colourless	Plastic matt-chrome	**44-702.27**	1	23	1	0.012
				Plastic matt-grey	**44-702.67**	1	23	1	0.012

Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Illuminated pushbutton actuator

Essential Accessories:

- Front adapter, front mounting page 42
- Lamp element, front mounting page 43
- Single-LED page 45
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Front ring	Lens	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Illuminated pushbutton actuator markable with text plate translucent white	IP 65	M	Plastic matt-chrome	Plastic blue	**44-746.26**	1	24	20	0.012
				Plastic green	**44-746.25**	1	24	20	0.012
				Plastic red	**44-746.22**	1	24	20	0.012
				Plastic white	**44-746.29**	1	24	20	0.012
				Plastic yellow	**44-746.24**	1	24	20	0.012
			Plastic matt-grey	Plastic blue	**44-746.66**	1	24	20	0.012
				Plastic green	**44-746.65**	1	24	20	0.012
				Plastic red	**44-746.62**	1	24	20	0.012
				Plastic white	**44-746.69**	1	24	20	0.012
				Plastic yellow	**44-746.64**	1	24	20	0.012
markable with text plate translucent white, up to max. 3 switching elements	IP 65	MA	Plastic matt-chrome	Plastic blue	**44-747.26**	1	24	6	0.012
				Plastic green	**44-747.25**	1	24	6	0.012
				Plastic red	**44-747.22**	1	24	6	0.012
				Plastic white	**44-747.29**	1	24	6	0.012
				Plastic yellow	**44-747.24**	1	24	6	0.012
			Plastic matt-grey	Plastic blue	**44-747.66**	1	24	6	0.012
				Plastic green	**44-747.65**	1	24	6	0.012
				Plastic red	**44-747.62**	1	24	6	0.012
				Plastic white	**44-747.69**	1	24	6	0.012
				Plastic yellow	**44-747.64**	1	24	6	0.012

Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Double pushbutton actuator

Essential Accessories:

- Front adapter, front mounting page 42
- Lamp element, front mounting page 43
- Single-LED page 45
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Front bezel	Lens	Marking	□ 29.5 x 56 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	kg
Double pushbutton actuator with illuminative centre window	IP 65	M	Plastic matt-chrome	Plastic green-red	I - 0	**44-771.2**	3	3	36	0.018
					without	**44-770.2**	3	3	36	0.018
				Plastic white-black	I - 0	**44-774.2**	3	3	36	0.018
					without	**44-773.2**	3	3	36	0.018
			Plastic matt-grey	Plastic green-red	I - 0	**44-771.6**	3	3	36	0.018
					without	**44-770.6**	3	3	36	0.018
				Plastic white-black	I - 0	**44-774.6**	3	3	36	0.018
					without	**44-773.6**	3	3	36	0.018

Switching action: M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59

Emergency-stop pushbutton actuator, foolproof EN IEC 60947-5-5

Application as per DIN EN ISO 13850 and EN 60204-1

Essential Accessories:

Front adapter, front mounting page 42
Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Mushroom had cap	Ø 37 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Emergency-stop pushbutton actuator, foolproof EN IEC 60947-5-5 Foolproof, Shaft yellow Key to unlock anti-clockwise Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	MA	Plastic red	**44-713**	2	32	5	0.066
Yellow shaft Twist to unlock anti-clockwise up to 3 Switching elements max. in 1st level	IP 65	MA	Plastic red	**44-712**	2	32	5	0.040

Other lock numbers on request
Switching action: MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Emergency-stop enclosure

	Protection degree	Terminals	Switching action	Contacts	Mushroom had cap	Ø 37 mm Typ-Nr.	Technical drawing	kg
Emergency-stop enclosure with 1 Emergency-stop pushbutton, foolproof, twist to unlock. Enclosure 72 x 84 mm, yellow	IP 65	ST	MA	1 NC + 1 NO	Plastic red	**44-001.4-05**	44	0.234

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed, NO = Normally open
Technical drawing from page 59

Stop pushbutton actuator


Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element non-stackable, base mounting page 43
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Mushroom had cap	Ø 50 mm Typ-Nr.	Ø 37 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Stop pushbutton actuator Yellow shaft Twist to unlock anti-clockwise up to 3 Switching elements max. in 1st level	IP 65	MA	Plastic red	**44-710**		2	33	5	0.040
					44-711	2	33	5	0.035

Switching action: MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Stop pushbutton enclosure

	Protection degree	Terminals	Switching action	Contacts	Mushroom had cap	Lens	Ø 50 mm Typ-Nr.	Technical drawing	kg
Stop pushbutton enclosure with 1 Stop pushbutton, twist to unlock. Enclosure 72 x 84 mm, yellow	IP 65	ST	MA	1 NC + 1 NO	Plastic	red	**44-001.4-03**	44	0.234

Terminals: ST = Screw terminal
Switching action: MA = Maintained action
Contacts: NC = Normally closed, NO = Normally open
Technical drawing from page 59

Mushroom-head pushbutton actuator

Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element stackable, front mounting page 42

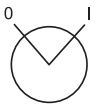
	Front protection	Switching action	Front ring	Mushroom had cap	Ø 50 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Mushroom-head pushbutton actuator	IP 65	M	Plastic matt-chrome	Plastic black	**44-707.20**	2	31	2	0.028
				Plastic green	**44-707.25**	2	31	2	0.028
				Plastic red	**44-707.22**	2	31	2	0.028
			Plastic matt-grey	Plastic black	**44-707.60**	2	31	2	0.028
				Plastic green	**44-707.65**	2	31	2	0.028
				Plastic red	**44-707.62**	2	31	2	0.028

Switching action: M = Momentary action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Keylock switch actuator 2 positions

Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element stackable, front mounting page 42



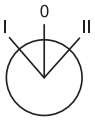
	Front protection	Switching action	Key remove	Front ring	Ø 28 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Keylock switch actuator 2 positions Position 0 : Basic position Position I : Maintained action 90° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	MA	0	Plastic matt-chrome	**44-730.21**	4	1	30	30	0.051
				Plastic matt-grey	**44-730.61**	4	1	30	30	0.051
			0 + I	Plastic matt-chrome	**44-730.22**	4	1	30	30	0.051
				Plastic matt-grey	**44-730.62**	4	1	30	30	0.051
Position 0 : Basic position Position I : Momentary action 90° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	M	0	Plastic matt-chrome	**44-732.21**	4	1	30	27	0.051
				Plastic matt-grey	**44-732.61**	4	1	30	27	0.051

Other lock numbers on request
Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Keylock switch actuator 3 positions

Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element stackable, front mounting page 42



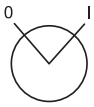
	Front protection	Switching action	Key remove	Front ring	Ø 28 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Keylock switch actuator 3 positions Position 0 : Basic position Position I : Maintained action 60° Position II : Momentary action 60° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	MA-0-M	0	Plastic matt-chrome	**44-736.21**	5	1	30	31	0.051
				Plastic matt-grey	**44-736.61**	5	1	30	31	0.051
			I + 0	Plastic matt-chrome	**44-736.23**	5	1	30	31	0.051
				Plastic matt-grey	**44-736.63**	5	1	30	31	0.051
Position 0 : Basic position Position I : Momentary action 60° Position II : Maintained action 60° Standard lock 9500 up to 3 Switching elements in 1st level	IP 65	M-0-MA	0	Plastic matt-chrome	**44-737.21**	5	1	30	29	0.051
				Plastic matt-grey	**44-737.61**	5	1	30	29	0.051
			0 + II	Plastic matt-chrome	**44-737.24**	5	1	30	29	0.051
				Plastic matt-grey	**44-737.64**	5	1	30	29	0.051
Position 0 : Basic position Position I + II : Maintained action 60° Standard lock 9500 up to 3 Switching elements in 1st level	IP 65	MA-0-MA	0	Plastic matt-chrome	**44-734.21**	5	1	30	32	0.051
				Plastic matt-grey	**44-734.61**	5	1	30	32	0.051
			0 + II	Plastic matt-chrome	**44-734.24**	5	1	30	32	0.051
				Plastic matt-grey	**44-734.64**	5	1	30	32	0.051
			I + 0	Plastic matt-chrome	**44-734.23**	5	1	30	32	0.051
				Plastic matt-grey	**44-734.63**	5	1	30	32	0.051
			I + 0 + II	Plastic matt-chrome	**44-734.25**	5	1	30	32	0.051
				Plastic matt-grey	**44-734.65**	5	1	30	32	0.051
Position 0 : Basic position Position I + II : Momentary action 60° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	M-0-M	0	Plastic matt-chrome	**44-735.21**	5	1	30	28	0.051
				Plastic matt-grey	**44-735.61**	5	1	30	28	0.051

Other lock numbers on request
Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Selector switch actuator 2 positions

Essential Accessories:

Front adapter, front mounting page 42
Slow-make switching element stackable, front mounting page 42



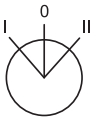
	Front protection	Switching action	Lever	Front ring	Ø 28 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Selector switch actuator 2 positions Position 0 : Basic position Position I : Maintained action 90° up to 3 Switching elements max. in 1st level	IP 65	MA	Plastic black	Plastic matt-chrome	**44-720.20**	4	1	21	14	0.021
			Plastic grey	Plastic matt-grey	**44-720.68**	4	1	21	14	0.021
			Plastic red	Plastic matt-chrome	**44-720.22**	4	1	21	14	0.021
				Plastic matt-grey	**44-720.62**	4	1	21	14	0.021
Position 0 : Basic position Position I : Momentary action 90° up to 3 Switching elements in 1st level	IP 65	M	Plastic black	Plastic matt-chrome	**44-722.20**	4	1	21	11	0.021
			Plastic grey	Plastic matt-grey	**44-722.68**	4	1	21	11	0.021

Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Selector switch actuator 3 positions

Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element stackable, front mounting page 42



	Front protection	Switching action	Lever	Front ring	Ø 28 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Selector switch actuator 3 positions Position 0 : Basic position position I : Maintained action 60° Position II : Momentary action 60° up to 3 Switching elements max. in 1st level	IP 65	MA-0-M	Plastic black	Plastic matt-chrome	**44-726.20**	5	1	21	15	0.021
			Plastic grey	Plastic matt-grey	**44-726.68**	5	1	21	15	0.021
Position 0 : Basic position Position I : Momentary action 60° Position II : Maintained action 60° up to 3 Switching elements max. in 1st level	IP 65	M-0-MA	Plastic black	Plastic matt-chrome	**44-727.20**	5	1	21	13	0.021
			Plastic grey	Plastic matt-grey	**44-727.68**	5	1	21	13	0.021
Position 0 : Basic position Position I + II : Maintained action 60° up to 3 Switching elements max. in 1st level	IP 65	MA-0-MA	Plastic black	Plastic matt-chrome	**44-724.20**	5	1	21	16	0.021
			Plastic grey	Plastic matt-grey	**44-724.68**	5	1	21	16	0.021
Position 0 : Basic position Position I + II : Momentary action 60° up to 3 Switching elements max. in 1st level	IP 65	M-0-M	Plastic black	Plastic matt-chrome	**44-725.20**	5	1	21	12	0.021
			Plastic grey	Plastic matt-grey	**44-725.68**	5	1	21	12	0.021

Switching action: MA = Maintained action, M = Momentary action

Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Interlocking pushbutton actuator

Essential Accessories:

- Front adapter, front mounting page 42
- Slow-make switching element non-stackable, base mounting page 43
- Slow-make switching element stackable, front mounting page 42

	Front protection	Front ring	Rotating knob	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Interlocking pushbutton actuator in activated state locked by turning to the right, otherwise Momentary action up to 3 Switching elements max. in 1st level	IP 65	Plastic matt-chrome	Plastic black	**44-742.20**	1	35	19	0.020
			Plastic red	**44-742.22**	1	35	19	0.020
		Plastic matt-grey	Plastic grey	**44-742.68**	1	35	19	0.020
			Plastic red	**44-742.62**	1	35	19	0.020

Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Pushbutton enclosure

	Front protection	Terminals	Switching action	Front ring	Contacts	Lens	Marking	Ø 28 mm Typ-Nr.	Technical drawing	kg
Pushbutton enclosure with 1 Pushbutton. Enclosure 72 x 84 mm, light-grey	IP 65	ST	M	Plastic matt-grey	1 NC + 1 NO	Plastic green	I	**44-001.8-01**	44	0.205
						Plastic red	0	**44-001.8-02**	44	0.206
with 2 Pushbuttons. Enclosure 72 x 117 mm, light-grey	IP 65	ST	M	Plastic matt-grey	2 NC + 2 NO	Plastic green-red	green: I, red: 0	**44-002.8-04**	44	0.247

Terminals: ST = Screw terminal
Switching action: M = Momentary action
Contacts: NC = Normally closed, NO = Normally open
Technical drawing from page 59

Potentiometer-drive

	Front protection	Front ring	Ø 28 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Potentiometer-drive Potentiometer 10 kΩ included others on request, resistance value as per IEC 63, series E3	IP 65	Plastic matt-chrome	**44-745.20-10K1**	1	37	4	0.030
		Plastic matt-grey	**44-745.60-10K1**	1	37	4	0.030
without Potentiometer Specification for Potentiometer : Shaft = length 32 mm Shaft end = Form A Diameter = 6 mm	IP 65	Plastic matt-chrome	**44-744.20**	1	37		0.016
		Plastic matt-grey	**44-744.60**	1	37		0.016

Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Indicator actuator full face illumination, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Lamp element, front mounting page 43
- Single-LED page 45

	Front protection	Front ring	Lens	Typ-Nr.	Mounting dimensions	Technical drawing	kg
Indicator actuator full face illumination, flush mounting non-markable	IP 65	Plastic matt-chrome	Plastic blue	**44-750.26**	5	12	0.008
			Plastic colourless	**44-750.27**	5	12	0.008
			Plastic green	**44-750.25**	5	12	0.008
			Plastic red	**44-750.22**	5	12	0.008
			Plastic yellow	**44-750.24**	5	12	0.008
		Plastic matt-grey	Plastic blue	**44-750.66**	5	12	0.008
			Plastic colourless	**44-750.67**	5	12	0.008
			Plastic green	**44-750.65**	5	12	0.008
			Plastic red	**44-750.62**	5	12	0.008
			Plastic yellow	**44-750.64**	5	12	0.008

Mounting dimensions from page 58, Technical drawing from page 59

Indicator actuator front illumination, flush mounting



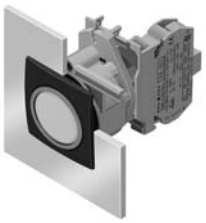
Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Lamp element, front mounting page 43
- Single-LED page 45

	Front protection	Front ring	Lens	Typ-Nr.	Mounting dimensions	Technical drawing	kg
Indicator actuator front illumination, flush mounting markable with text plate translucent white	IP 65	Plastic matt-chrome	Plastic blue	**44-751.26**	5	12	0.007
			Plastic green	**44-751.25**	5	12	0.007
			Plastic red	**44-751.22**	5	12	0.007
			Plastic white	**44-751.29**	5	12	0.007
			Plastic yellow	**44-751.24**	5	12	0.007
		Plastic matt-grey	Plastic blue	**44-751.66**	5	12	0.007
			Plastic green	**44-751.65**	5	12	0.007
			Plastic red	**44-751.62**	5	12	0.007
			Plastic white	**44-751.69**	5	12	0.007
			Plastic yellow	**44-751.64**	5	12	0.007

Mounting dimensions from page 58, Technical drawing from page 59

Pushbutton actuator, flush mounting





Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Lens Mounting type	Front ring	Lens	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Pushbutton actuator, flush mounting non-markable	IP 65	M	level with bezel	Plastic matt-chrome	Plastic black	**44-701.20**	5	11	2	0.013
					Plastic blue	**44-701.26**	5	11	2	0.013
					Plastic green	**44-701.25**	5	11	2	0.013
					Plastic red	**44-701.22**	5	11	2	0.013
					Plastic white	**44-701.29**	5	11	2	0.013
					Plastic yellow	**44-701.24**	5	11	2	0.013
				Plastic matt-grey	Plastic black	**44-701.60**	5	11	2	0.013
					Plastic blue	**44-701.66**	5	11	2	0.013
					Plastic green	**44-701.65**	5	11	2	0.013
					Plastic red	**44-701.62**	5	11	2	0.013
					Plastic white	**44-701.69**	5	11	2	0.013
					Plastic yellow	**44-701.64**	5	11	2	0.013
			lower than bezel	Plastic matt-chrome	Plastic black	**44-704.20**	5	11	2	0.015
					Plastic blue	**44-704.26**	5	11	2	0.015
					Plastic green	**44-704.25**	5	11	2	0.015
					Plastic red	**44-704.22**	5	11	2	0.015
					Plastic white	**44-704.29**	5	11	2	0.015
					Plastic yellow	**44-704.24**	5	11	2	0.015
				Plastic matt-grey	Plastic black	**44-704.60**	5	11	2	0.015
					Plastic blue	**44-704.66**	5	11	2	0.015
					Plastic green	**44-704.65**	5	11	2	0.015
					Plastic red	**44-704.62**	5	11	2	0.015
					Plastic white	**44-704.69**	5	11	2	0.015
					Plastic yellow	**44-704.64**	5	11	2	0.015
			raised above bezel	Plastic matt-chrome	Plastic black	**44-703.20**	5	11	2	0.015
					Plastic blue	**44-703.26**	5	11	2	0.015
					Plastic green	**44-703.25**	5	11	2	0.015
					Plastic red	**44-703.22**	5	11	2	0.015
					Plastic white	**44-703.29**	5	11	2	0.015
					Plastic yellow	**44-703.24**	5	11	2	0.015
				Plastic matt-grey	Plastic black	**44-703.60**	5	11	2	0.015
					Plastic blue	**44-703.66**	5	11	2	0.015
					Plastic green	**44-703.65**	5	11	2	0.015
					Plastic red	**44-703.62**	5	11	2	0.015
					Plastic white	**44-703.69**	5	11	2	0.015
					Plastic yellow	**44-703.64**	5	11	2	0.015

Continuation see next page

Continued from previous page

	Front protection	Switching action	Lens Mounting type	Front ring	Lens	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	[kg]
non-markable up to 3 Switching elements max.	IP 65	MA	level with bezel	Plastic matt-chrome	Plastic black	**44-702.20**	5	11	1	0.013
					Plastic blue	**44-702.26**	5	11	1	0.013
					Plastic green	**44-702.25**	5	11	1	0.013
					Plastic red	**44-702.22**	5	11	1	0.013
					Plastic white	**44-702.29**	5	11	1	0.013
					Plastic yellow	**44-702.24**	5	11	1	0.013
				Plastic matt-grey	Plastic black	**44-702.60**	5	11	1	0.013
					Plastic blue	**44-702.66**	5	11	1	0.013
					Plastic green	**44-702.65**	5	11	1	0.013
					Plastic red	**44-702.62**	5	11	1	0.013
					Plastic white	**44-702.69**	5	11	1	0.013
					Plastic yellow	**44-702.64**	5	11	1	0.013
			lower than bezel	Plastic matt-chrome	Plastic black	**44-706.20**	5	11	1	0.015
					Plastic blue	**44-706.26**	5	11	1	0.015
					Plastic green	**44-706.25**	5	11	1	0.015
					Plastic red	**44-706.22**	5	11	1	0.015
					Plastic white	**44-706.29**	5	11	1	0.015
					Plastic yellow	**44-706.24**	5	11	1	0.015
				Plastic matt-grey	Plastic black	**44-706.60**	5	11	1	0.015
					Plastic blue	**44-706.66**	5	11	1	0.015
					Plastic green	**44-706.65**	5	11	1	0.015
					Plastic red	**44-706.62**	5	11	1	0.015
					Plastic white	**44-706.69**	5	11	1	0.015
					Plastic yellow	**44-706.64**	5	11	1	0.015
			raised above bezel	Plastic matt-chrome	Plastic black	**44-705.20**	5	11	1	0.015
					Plastic blue	**44-705.26**	5	11	1	0.015
					Plastic green	**44-705.25**	5	11	1	0.015
					Plastic red	**44-705.22**	5	11	1	0.015
					Plastic white	**44-705.29**	5	11	1	0.015
					Plastic yellow	**44-705.24**	5	11	1	0.015
				Plastic matt-grey	Plastic black	**44-705.60**	5	11	1	0.015
					Plastic blue	**44-705.66**	5	11	1	0.015
					Plastic green	**44-705.65**	5	11	1	0.015
					Plastic red	**44-705.62**	5	11	1	0.015
					Plastic white	**44-705.69**	5	11	1	0.015
					Plastic yellow	**44-705.64**	5	11	1	0.015

Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Pushbutton actuator markable, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Marking plate for Lens page 38
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Lens	Front ring	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Pushbutton actuator markable, flush mounting Colour of lens is determinded by the colour of text plate	IP 65	M	Plastic colourless	Plastic matt-chrome	**44-701.27**	5	25	2	0.012
				Plastic matt-grey	**44-701.67**	5	25	2	0.012
Colour of lens is determinded by the colour of text plate, up to 3 Switching elements max.	IP 65	MA	Plastic colourless	Plastic matt-chrome	**44-702.27**	5	25	1	0.012
				Plastic matt-grey	**44-702.67**	5	25	1	0.012

Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Illuminated pushbutton actuator, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Lamp element, front mounting page 43
- Single-LED page 45
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Front ring	Lens	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Illuminated pushbutton actuator, flush mounting markable with text plate translucent white	IP 65	M	Plastic matt-chrome	Plastic blue	**44-746.26**	5	25	20	0.012
				Plastic green	**44-746.25**	5	25	20	0.012
				Plastic red	**44-746.22**	5	25	20	0.012
				Plastic white	**44-746.29**	5	25	20	0.012
				Plastic yellow	**44-746.24**	5	25	20	0.012
			Plastic matt-grey	Plastic blue	**44-746.66**	5	25	20	0.012
				Plastic green	**44-746.65**	5	25	20	0.012
				Plastic red	**44-746.62**	5	25	20	0.012
				Plastic white	**44-746.69**	5	25	20	0.012
				Plastic yellow	**44-746.64**	5	25	20	0.012
markable with text plate translucent white, up to max. 3 switching elements	IP 65	MA	Plastic matt-chrome	Plastic blue	**44-747.26**	5	25	6	0.012
				Plastic green	**44-747.25**	5	25	6	0.012
				Plastic red	**44-747.22**	5	25	6	0.012
				Plastic white	**44-747.29**	5	25	6	0.012
				Plastic yellow	**44-747.24**	5	25	6	0.012
			Plastic matt-grey	Plastic blue	**44-747.66**	5	25	6	0.012
				Plastic green	**44-747.65**	5	25	6	0.012
				Plastic red	**44-747.62**	5	25	6	0.012
				Plastic white	**44-747.69**	5	25	6	0.012
				Plastic yellow	**44-747.64**	5	25	6	0.012

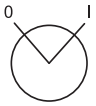
Switching action: M = Momentary action, MA = Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Keylock switch actuator 2 positions, flush mounting



Essential Accessories:

- Base adaptor page 43
- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42



	Front protection	Switching action	Key remove	Front ring	Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Keylock switch actuator 2 positions, flush mounting Position 0 : Basic position Position I : Maintained action 90° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	MA	0	Plastic matt-chrome	**44-730.21**	4	5	34	30	0.051
				Plastic matt-grey	**44-730.61**	4	5	34	30	0.051
			0 + I	Plastic matt-chrome	**44-730.22**	4	5	34	30	0.051
				Plastic matt-grey	**44-730.62**	4	5	34	30	0.051
Position 0 : Basic position Position I : Momentary action 90° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	M	0	Plastic matt-chrome	**44-732.21**	4	5	34	27	0.051
				Plastic matt-grey	**44-732.61**	4	5	34	27	0.051

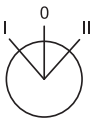
Other lock numbers on request
Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Keylock switch actuator 3 positions, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42



	Front protection	Switching action	Key remove	Front ring	Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Keylock switch actuator 3 positions, flush mounting Position 0 : Basic position Position I : Maintained action 60° Position II : Momentary action 60° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	MA-0-M	0	Plastic matt-chrome	**44-736.21**	5	5	34	31	0.051
				Plastic matt-grey	**44-736.61**	5	5	34	31	0.051
			I + 0	Plastic matt-chrome	**44-736.23**	5	5	34	31	0.051
				Plastic matt-grey	**44-736.63**	5	5	34	31	0.051
Position 0 : Basic position Position I : Momentary action 60° Position II : Maintained action 60° Standard lock 9500 up to 3 Switching elements in 1st level	IP 65	M-0-MA	0	Plastic matt-chrome	**44-737.21**	5	5	34	29	0.051
				Plastic matt-grey	**44-737.61**	5	5	34	29	0.051
			0 + II	Plastic matt-chrome	**44-737.24**	5	5	34	29	0.051
				Plastic matt-grey	**44-737.64**	5	5	34	29	0.051
Position 0 : Basic position Position I + II : Maintained action 60° Standard lock 9500 up to 3 Switching elements in 1st level	IP 65	MA-0-MA	0	Plastic matt-chrome	**44-734.21**	5	5	34	32	0.051
				Plastic matt-grey	**44-734.61**	5	5	34	32	0.051
			0 + II	Plastic matt-chrome	**44-734.24**	5	5	34	32	0.051
				Plastic matt-grey	**44-734.64**	5	5	34	32	0.051
			I + 0	Plastic matt-chrome	**44-734.23**	5	5	34	32	0.051
				Plastic matt-grey	**44-734.63**	5	5	34	32	0.051
			I + 0 + II	Plastic matt-chrome	**44-734.25**	5	5	34	32	0.051
				Plastic matt-grey	**44-734.65**	5	5	34	32	0.051
Position 0 : Basic position Position I + II : Momentary action 60° Standard lock 9500 up to 3 Switching elements max. in 1st level	IP 65	M-0-M	0	Plastic matt-chrome	**44-735.21**	5	5	34	28	0.051
				Plastic matt-grey	**44-735.61**	5	5	34	28	0.051

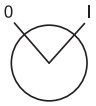
Other lock numbers on request
Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Selector switch actuator 2 positions, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42



	Front protection	Switching action	Lever	Front ring	Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	[kg]
Selector switch actuator 2 positions, flush mounting Position 0 : Basic position Position I : Maintained action 90° up to 3 Switching elements max. in 1st level	IP 65	MA	Plastic black	Plastic matt-chrome	**44-720.20**	4	5	26	14	0.021
			Plastic grey	Plastic matt-grey	**44-720.68**	4	5	26	14	0.021
			Plastic red	Plastic matt-chrome	**44-720.22**	4	5	26	14	0.021
				Plastic matt-grey	**44-720.62**	4	5	26	14	0.021
Position 0 : Basic position Position I : Momentary action 90° up to 3 Switching elements in 1st level	IP 65	M	Plastic black	Plastic matt-chrome	**44-722.20**	4	5	26	11	0.021
			Plastic grey	Plastic matt-grey	**44-722.68**	4	5	26	11	0.021

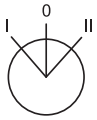
Switching action: MA = Maintained action, M = Momentary action
Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Selector switch actuator 3 positions, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42



	Front protection	Switching action	Lever	Front ring	Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Selector switch actuator 3 positions, flush mounting Position 0 : Basic position position I : Maintained action 60° Position II : Momentary action 60° up to 3 Switching elements max. in 1st level	IP 65	MA-0-M	Plastic black	Plastic matt-chrome	**44-726.20**	5	5	26	15	0.021
			Plastic grey	Plastic matt-grey	**44-726.68**	5	5	26	15	0.021
Position 0 : Basic position Position I : Momentary action 60° Position II : Maintained action 60° up to 3 Switching elements max. in 1st level	IP 65	M-0-MA	Plastic black	Plastic matt-chrome	**44-727.20**	5	5	26	13	0.021
			Plastic grey	Plastic matt-grey	**44-727.68**	5	5	26	13	0.021
Position 0 : Basic position Position I + II : Maintained action 60° up to 3 Switching elements max. in 1st level	IP 65	MA-0-MA	Plastic black	Plastic matt-chrome	**44-724.20**	5	5	26	16	0.021
			Plastic grey	Plastic matt-grey	**44-724.68**	5	5	26	16	0.021
Position 0 : Basic position Position I + II : Momentary action 60° up to 3 Switching elements max. in 1st level	IP 65	M-0-M	Plastic black	Plastic matt-chrome	**44-725.20**	5	5	26	12	0.021
			Plastic grey	Plastic matt-grey	**44-725.68**	5	5	26	12	0.021

Switching action: MA = Maintained action, M = Momentary action

Component layout from page 57, Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Interlocking pushbutton actuator, flush mounting



Essential Accessories:

- Front adapter, front mounting page 42
- Front bezel set without label support, flush mounting page 38
- Slow-make switching element stackable, front mounting page 42

	Front protection	Switching action	Front ring	Rotating knob	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	[kg]
Interlocking pushbutton actuator, flush mounting in activated state locked by turning to the right, otherwise Momentary action up to 3 Switching elements max. in 1st level	IP 65	M-MA	Plastic matt-chrome	Plastic black	**44-742.20**	5	38	19	0.020
				Plastic red	**44-742.22**	5	38	19	0.020
			Plastic matt-grey	Plastic grey	**44-742.68**	5	38	19	0.020
				Plastic red	**44-742.62**	5	38	19	0.020

Switching action: M-MA = Momentary action-Maintained action
Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Potentiometer-drive, flush mounting



Essential Accessories:

- Front bezel set without label support, flush mounting page 38

	Front protection	Front ring	Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	[kg]
Potentiometer-drive, flush mounting Potentiometer 10 kΩ included others on request, resistance value as per IEC 63, series E3	IP 65	Plastic matt-chrome	**44-745.20-10K1**	5	1	4	0.030
		Plastic matt-grey	**44-745.60-10K1**	5	1	4	0.030
without Potentiometer Specification for Potentiometer : Shaft = length 32 mm Shaft end = Form A Diameter = 6 mm	IP 65	Plastic matt-chrome	**44-744.20**	5	1		0.016
		Plastic matt-grey	**44-744.60**	5	1		0.016

Mounting dimensions from page 58, Technical drawing from page 59, Circuit drawing from page 73

Front

Lens

	Lens	Ø 28 mm Typ-Nr.	kg
Lens for Indicator and Illuminated pushbutton, front illumination Pushbutton markable	Plastic blue transparent flush	**44-966.6**	0.001
	Plastic colourless transparent flush	**44-966.7**	0.001
	Plastic green transparent flush	**44-966.5**	0.001
	Plastic red transparent flush	**44-966.2**	0.001
	Plastic yellow transparent flush	**44-966.4**	0.001

Marking plate for Lens

	Marking plate	Typ-Nr.	kg
Marking plate for Lens for Indicator and Illuminated pushbutton, front illumination Pushbutton markable	Plastic white translucent	**44-962.9**	0.001
for Pushbutton markable	Plastic black opaque	**44-961.0**	0.001
	Plastic blue opaque	**44-961.6**	0.001
	Plastic green opaque	**44-961.5**	0.001
	Plastic red opaque	**44-961.2**	0.001
	Plastic yellow opaque	**44-961.4**	0.001

Marking information see in chapter Marking

Lens cap

	Lens cap	Ø 28 mm Typ-Nr.	kg
Lens cap for Indicator full face illumination with sealing ring	Plastic blue transparent	**44-965.6**	0.003
	Plastic colourless transparent	**44-965.7**	0.003
	Plastic green transparent	**44-965.5**	0.003
	Plastic red transparent	**44-965.2**	0.003
	Plastic yellow transparent	**44-965.4**	0.003

Front bezel set without label support, flush mounting

	Front bezel	⍁ 36 x 36 mm Typ-Nr.	Ø 36 mm Typ-Nr.	Technical drawing	kg
Front bezel set without label support, flush mounting for Illuminated pushbutton and Pushbutton, Selector- and Keylock switch, Interlocking pushbutton the mounting depth extends for 12 mm	Plastic black	**44-946.03**	**44-946.03-A**	43	0.010
for Indicator and Potentiometer the mounting depth extends for 3 mm	Plastic black	**44-946.01**	**44-946.01-A**	43	0.006

Technical drawing from page 59

Front bezel set with label support, flush mounting

	Front bezel	Typ-Nr.	Technical drawing	[kg]
Front bezel set with label support, flush mounting for Illuminated pushbutton and Pushbutton, Selector- and Keylock switch, Interlocking pushbutton the mounting depth extends for 12 mm	Plastic black	**44-946.04**	43	0.011
for Indicator and Potentiometer the mounting depth extends for 3 mm	Plastic black	**44-946.02**	43	0.007

Technical drawing from page 59

Label for front bezel set with label support, flush mounting

	Typ-Nr.	[kg]
Label for front bezel set with label support, flush mounting 27 x 18 mm, adhesive, plastic (2 layers Aluminium/black)	**44-946**	0.001
27 x 18 mm, adhesive, plastic (2 layers black/white)	**44-946.0**	0.001

Marking information see in chapter Marking

Legend plate

	Typ-Nr.	Technical drawing	[kg]
Legend plate 30 x 60 mm, Aluminium natural, for engraving, for protection IP 40	**44-955**	8	0.001

Technical drawing from page 59

Label support without label

label to be ordered separatly (44-960)

	Typ-Nr.	Technical drawing	[kg]
Label support without label 29.5 x 49.5 mm, plastic black, remove sealing ring from actuator	**44-944.00**	7	0.002
	44-944.08	7	0.002

Technical drawing from page 59

Label support with label

	Typ-Nr.	Technical drawing	kg
Label support with label 29.5 x 49.5 mm, plastic black, label unmarked, remove sealing ring from actuator	**44-945.00**	7	0.002
29.5 x 49.5 mm, plastic grey, label unmarked, remove sealing ring from actuator	**44-945.08**	7	0.002

Technical drawing from page 59

Label for Label support with label

	Typ-Nr.	kg
Label for Label support with label 13 x 26 mm, Aluminium black	**44-960**	0.001

Marking information see in chapter Marking

Front ring flush

	Front ring	Typ-Nr.	kg
Front ring flush for Illuminated Pushbutton- and Pushbutton actuator	Plastic matt-chrome	**44-967.2**	0.002
	Plastic matt-grey	**44-967.6**	0.002

Front ring raised

	Front ring	Typ-Nr.	kg
Front ring raised for Pushbutton actuator	Plastic matt-chrome	**44-968.2**	0.003
	Plastic matt-grey	**44-968.6**	0.003

Protective cover

	Typ-Nr.	Technical drawing	kg
Protective cover for Illuminated Pushbutton and Pushbutton with flush Front ring hinged, transparent, with means for sealing, front panel thickness up to 3 mm max. Remove anti-twisting nose from the actuator.	**44-922**	9	0.007

Technical drawing from page 59

Front protective cap

	Front protective cap	Typ-Nr.	kg
Front protective cap only in connection with flush Front ring. Protection when used under adverse ambient conditions. Remove gasket from the actuator. Cannot be used with the label support.	Silicone colourless transparent	**44-917.07**	0.002

Keylock cap

	Keylock cap	Typ-Nr.	kg
Keylock cap for Keylock pushbutton, standard mounting. Protection when used under adverse ambient conditions. Remove gasket from the actuator. Cannot be used with the label support.	Plastic black	**44-921.00**	0.004
	Plastic grey	**44-921.08**	0.004

Blind plug

	Blind plug	Typ-Nr.	Mounting dimensions	Technical drawing	kg
Blind plug Mounting hole size 22.5 mm Lamp transformer can be mounted with front adaptor	Plastic grey	**44-915**	1	5	0.008

Mounting dimensions from page 58, Technical drawing from page 59

Spare key

	Typ-Nr.	kg
Spare key Standard lock 9500	**44-919**	0.007

Other lock numbers on request

Backside

Front adapter, front mounting

	Marking	Typ-Nr.	Technical drawing	kg
Front adapter, front mounting for Switching element or Lamp element	without	**44-900**	2	0.007
for Switching elements in 1. level	1 3 2	**44-901**	2	0.007
for Switching elements in 2. level	1/2 5/6 4/3	**44-902**	2	0.007
for Switching elements in 3. level	1/2/3 7/8/9 6/5/4	**44-903**	2	0.007

Front adaptor marking :
Terminal marking and distinctive number as per DIN EN 50013. The operating characters are marked on the switching elements beside the screw terminals
Technical drawing from page 59

Slow-make switching element stackable, front mounting

	Switch rating	Contacts	Contact material	Terminals	Typ-Nr.	Technical drawing	Circuit drawing	kg
Slow-make switching element stackable, front mounting Forced opening as per EN IEC 947-5-1	500 VAC, 10 A	1 NC	Au/Ag	ST	**44-152**	39	38	0.014
			Hard silver	ST	**44-151**	39	38	0.014
		1 NC + 1 NO	Au/Ag	ST	**44-132**	39	35	0.017
			Hard silver	ST	**44-131**	39	35	0.017
		1 NO	Au/Ag	ST	**44-162**	39	39	0.014
			Hard silver	ST	**44-161**	39	39	0.014
overlapping, not to use with Emergecy-stop switch	500 VAC, 10 A	1 NC + 1 NO	Hard silver	ST	**44-141**	39	36	0.017

Contacts: NC = Normally closed, NO = Normally open
Contact material: Au/Ag = Gold/Silver
Terminals: ST = Screw terminal
Technical drawing from page 59, Circuit drawing from page 73

Slow-make switching element non-stachable, front mounting

	Switch rating	Contacts	Contact material	Terminals	Typ-Nr.	Technical drawing	Circuit drawing	kg
Slow-make switching element non-stachable, front mounting	500 VAC, 10 A	1 NO	Hard silver	ST	**44-121**	39	39	0.010
Forced opening as per EN IEC 947-5-1	500 VAC, 10 A	1 NC	Hard silver	ST	**44-111**	39	38	0.010

Contacts: NO = Normally open, NC = Normally closed
Terminals: ST = Screw terminal
Technical drawing from page 59, Circuit drawing from page 73

Lamp element, front mounting

	Terminals	Typ-Nr.	Technical drawing	Circuit drawing	kg
Lamp element, front mounting Lamp socket BA9s, max. 2.6 W	ST	**44-524**	40	3	0.011

Terminals: ST = Screw terminal
Technical drawing from page 59, Circuit drawing from page 73

Base adaptor

	Marking	Typ-Nr.	kg
Base adaptor	1 3 2	**44-905**	0.006

Front adaptor marking :
Terminal marking and distinctive number as per DIN EN 50013. The operating characters are marked on the switching elements beside the screw terminals

Slow-make switching element non-stackable, base mounting

	Switch rating	Contacts	Contact material	Terminals	Typ-Nr.	Technical drawing	Circuit drawing	kg
Slow-make switching element non-stackable, base mounting	500 VAC, 10 A	1 NO	Hard silver	ST	**44-221**	41	39	0.010
Forced opening as per EN IEC 947-5-1	500 VAC, 10 A	1 NC	Hard silver	ST	**44-211**	41	38	0.010

Contacts: NO = Normally open, NC = Normally closed
Terminals: ST = Screw terminal
Technical drawing from page 59, Circuit drawing from page 73

Lamp, base mounting

	Terminals	Typ-Nr.	Technical drawing	Circuit drawing	kg
Lamp, base mounting Lamp socket Ba9s, max. 2.6 W	ST	**44-525**	4	3	0.011

Terminals: ST = Screw terminal
Technical drawing from page 59, Circuit drawing from page 73

Blind element

	Typ-Nr.	Technical drawing	kg
Blind element for mounting of Lamp transformer	**44-940**	6	0.008

Technical drawing from page 59

Illumination

Filament lamp

The max. overall length of the lamp may not exeed 25 mm

	Socket	Operating voltage/-current	Typ-Nr.	kg
Filament lamp	BA9s	110 VAC/DC, 22 mA	**10-1422.1179**	0.002
		12 VAC/DC, 100 mA	**10-1409.1329**	0.002
		130 VAC/DC, 20 mA	**10-1424.1179**	0.002
		24 VAC/DC, 50 mA	**10-1412.1279**	0.002
		36 VAC/DC, 56 mA	**10-1416.1289**	0.002
		48 VAC/DC, 42 mA	**10-1419.1249**	0.002
		6 VAC/DC, 200 mA	**10-1406.1369**	0.002
		60 VAC/DC, 33 mA	**10-1420.1219**	0.002

Single-LED

The max. overall length of the lamp may not exeed 25 mm

	Socket	Light colour	Operating voltage/-current	Typ-Nr.	kg
Single-LED	BA9s	blue	12 VAC/DC, 16 mA	**10-2509.1146**	0.002
			130 VAC, 5 mA	**10-2H24.2056**	0.002
			230 VAC, 3 mA	**10-2H25.2046**	0.002
			24 VAC/DC, 15 mA	**10-2512.1146**	0.002
			28 VAC/DC, 13 mA	**10-2513.1146**	0.002
			48 VAC/DC, 4/8 mA	**10-2519.1056**	0.002
			6 VDC, 17 mA	**10-2506.1086**	0.002
		green	12 VAC/DC, 16 mA	**10-2509.1145**	0.002
			130 VAC, 5 mA	**10-2H24.2055**	0.002
			230 VAC, 3 mA	**10-2H25.2045**	0.002
			24 VAC/DC, 15 mA	**10-2512.1145**	0.002
			28 VAC/DC, 13 mA	**10-2513.1145**	0.002
			48 VAC/DC, 4/8 mA	**10-2519.1055**	0.002
			6 VDC, 17 mA	**10-2506.1085**	0.002
		red	12 VAC/DC, 16 mA	**10-2509.1142**	0.002
			130 VAC, 5 mA	**10-2H24.2052**	0.002
			230 VAC, 3 mA	**10-2H25.2042**	0.002
			24 VAC/DC, 15 mA	**10-2512.1142**	0.002
			28 VAC/DC, 13 mA	**10-2513.1142**	0.002
			48 VAC/DC, 4/8 mA	**10-2519.1052**	0.002
			6 VDC, 17 mA	**10-2506.1082**	0.002
		white diffuse	12 VAC/DC, 16 mA	**10-2509.1149**	0.002
			130 VAC, 5 mA	**10-2H24.2059**	0.002
			230 VAC, 3 mA	**10-2H25.2049**	0.002
			24 VAC/DC, 15 mA	**10-2512.1149**	0.002
			28 VAC/DC, 13 mA	**10-2513.1149**	0.002
			48 VAC/DC, 4/8 mA	**10-2519.1059**	0.002
			6 VDC, 17 mA	**10-2506.1089**	0.002
		yellow	12 VAC/DC, 16 mA	**10-2509.1144**	0.002
			130 VAC, 5 mA	**10-2H24.2054**	0.002
			230 VAC, 3 mA	**10-2H25.2044**	0.002
			24 VAC/DC, 15 mA	**10-2512.1144**	0.002
			28 VAC/DC, 13 mA	**10-2513.1144**	0.002
			48 VAC/DC, 4/8 mA	**10-2519.1054**	0.002
			6 VDC, 17 mA	**10-2506.1084**	0.002

Note:
AC operation through halve-wave rectifier possible, slight flickering can occure.
12, 24, 28, 48 VAC/DC versions with bridge rectifier. Used on a DC voltage and AC voltage with the same light output.

Resistor diode element

	Diode (1N 4007)	Operating voltage	Terminals	Typ-Nr.	Technical drawing	kg
Resistor diode element for front- and base mounting for Incandescent lamp 130 V, 2.4 W	1 D	220 ... 240 VAC	ST	**44-614.11**	3	0.009
for front- and base mounting for Incandescent lamp 60 V, 1.2 W	1 D	110 ... 125 VAC	ST	**44-614.12**	3	0.009
for front mounting for Incandescent lamp 130 V, 2.4 W	2 D	220 ... 240 VAC	ST	**44-614.21**	3	0.015
for front mounting for Incandescent lamp 60 V, 1.2 W	2 D	110 ... 125 VAC	ST	**44-614.22**	3	0.015

Diode (1N 4007): D = Diode
Terminals: ST = Screw terminal
Technical drawing from page 59

Diode element

	Diode (1N 4007)	Terminals	Typ-Nr.	Technical drawing	kg
Diode element for front- and base mounting	1 D	ST	**44-612.1**	3	0.009
	2 D	ST	**44-612.2**	3	0.011

Diode (1N 4007): D = Diode
Terminals: ST = Screw terminal
Technical drawing from page 59

Lamp transformer

	Operating voltage	Terminals	Typ-Nr.	Technical drawing	kg
Lamp transformer Short-circuit proof, 1.2 VA, 50/60 Hz, for front or base mounting	125 AC / 24 VAC	ST	**44-975**	42	0.102
	125 VAC / 6 VAC	ST	**44-970**	42	0.102
	230 VAC / 24 VAC	ST	**44-976**	42	0.102
	230 VAC / 6 VAC	ST	**44-971**	42	0.102
	400 VAC / 24 VAC	ST	**44-977**	42	0.102
	400 VAC / 6 VAC	ST	**44-972**	42	0.102

Terminals: ST = Screw terminal
Technical drawing from page 59

Series resistor

for lamp voltage reduction

	Operating voltage	Typ-Nr.	kg
Series resistor 10 kΩ, for filament lamp 48 V / 1.2 W	240 V	**44-957.050**	0.002
2.7 kΩ, for filament lamp 48 V / 1.2 W	110 V	**44-957.010**	0.002
3.3 kΩ, for filament lamp 48 V / 1.2 W	125 V	**44-957.020**	0.002
4.7 kΩ, for filament lamp 48 V / 1.2 W	145 V	**44-957.030**	0.002
6. kΩ, for filament lamp 110 ... 130 V / 2.4 W	230 V	**44-957.060**	0.002

Please keep to the country specific security rules.

Terminal plate empty

for fitting with series resistors

	Typ-Nr.	kg
Terminal plate empty 10 spaces 125 x 60 x 15 mm	**44-959.10**	0.045
15 spaces 187.5 x 60 x 15 mm	**44-959.15**	0.090
20 spaces 250 x 60 x 15 mm	**44-959.20**	0.106
5 spaces 62.5 x 60 x 15 mm	**44-959.05**	0.025

Emergency-stop pushbutton

Emergency-stop label

	Marking	Typ-Nr.	kg
Emergency-stop label 45 mm dia., yellow, adhesiv Front protection IP 65 when protection foil is removed	ARRET-D´URGENCE	**44-951.3**	0.002
	EMERGENCY-STOP	**44-951.2**	0.002
	NOT HALT	**44-951.4**	0.002
	NOT-AUS	**44-951.1**	0.002
	without	**44-951**	0.002
60 mm dia., yellow, adhesiv Front protection IP 65 when protection foil is removed	ARRET-D´URGENCE	**44-950.3**	0.004
	EMERGENCY-STOP	**44-950.2**	0.004
	NOT HALT	**44-950.4**	0.004
	NOT-AUS	**44-950.1**	0.004
	without	**44-950**	0.004
90 mm dia., yellow, adhesiv Front protection IP 65 when protection foil is removed	ARRET-D´URGENCE	**44-949.3**	0.009
	EMERGENCY-STOP	**44-949.2**	0.009
	NOT HALT	**44-949.4**	0.009
	NOT-AUS	**44-949.1**	0.009
	without	**44-949**	0.009

Emergency-stop enclosures

Colour yellow

	Dimension	Typ-Nr.	Technical drawing	kg
Emergency-stop enclosures 1 Mounting hole, with adaptor for base mounting	L 84 mm, W 72 mm, H 64 mm	**44-001.4**	44	0.174

Technical drawing from page 59

Cable gland

	Typ-Nr.	kg
Cable gland for Enclosure M20, with nut and sealing, fixing area 7 ... 13 mm dia.	**44-956**	0.009

Assembling

Enclosure

Colour light grey

	Dimension	Typ-Nr.	Technical drawing	kg
Enclosure 1 Mounting hole, with adaptor for base mounting	L 84 mm, W 72 mm, H 64 mm	**44-001.8**	44	0.175
2 Mounting holes, with adaptor for base mounting	L 117 mm, W 72 mm, H 64 mm	**44-002.8**	44	0.199
3 Mounting holes, with adaptor for base mounting	L 150 mm, W 72 mm, H 64 mm	**44-003.8**	44	0.252
5 Mounting holes, with adaptor for base mounting	L 215 mm, W 72 mm, H 64 mm	**44-005.8**	44	0.332

Technical drawing from page 59

Label for enclosure

	Typ-Nr.	kg
Label for enclosure 19 x 19 mm, adhesive, plastic, Aluminium plated (natural), unmarked,	**44-963**	0.001

Cable gland

	Typ-Nr.	kg
Cable gland for Enclosure M20, with nut and sealing, fixing area 7 ... 13 mm dia.	**44-956**	0.009

Reducing ring

	Typ-Nr.	kg
Reducing ring Aluminium natural, Mounting hole size 30.5 mm dia., 2 Reducing rings are required for each mounting hole	**44-925**	0.003

Mounting tool

	Typ-Nr.	kg
Mounting tool for Fixing nut, transparent Lens, Lens caps and Illumination	**44-935**	0.037

Slow-make switching element

Switching system

The double-break switching system can be supplied for the following switching functions: 1 normally closed, 1 normally open or 1 changeover contact with or without overlap.
The normally closed contacts have forced opening according to DIN 0660, IEC 60947-5-1 and DIN VDE 0113.
The switching element exhibits high reliability due to its H-contact system with relative friction. The normally open and normally closed contacts can be used electrically separated.
The standard version is ideal for high breaking capacities. For lower capacities a special version can be supplied.

Material

Material of contact
Standard version: Ag-Ni alloy
special version: Gold/Silver

Plastics
UL listed, Cd-free

Switching element
PC, PA 6.6 self-extinguishing

Mechanical characteristics

Actuating force
per switching element ≤5 N
Illuminated pushbutton actuator ≤10 N
Stop pushbutton actuator ≤20 N
Emergency-stop pushbutton actuator foolproof ≤70 N
Double pushbutton ≤12 N per contact surface

Actuating travel
approx. 6 mm

Mechanical lifetime
Slow-make switching element 10 x 10^6 switching operations
Pushbutton momentary action 5 x 10^6 switching operations
Pushbutton maintained action 1 x 10^6cycles of operation
Illuminated pushbutton momentary action 3 x 10^6 switching operations
Illuminated pushbutton maintained action 1 x 10^6 cycles of operation
Interlocking pushbutton 2 x 10^5 switching operations
Stop pushbutton not foolproof 1 x 10^5 cycles of operation
Emergency-stop foolproof >6050 cycles of operation
Keylock switch 2 x 10^5 cycles of operation
Selector switch 2 x 10^5 cycles of operation
Double pushbutton 2 x 10^5 switching operations per contact surface

Electrical characteristics

Rated Insulation Voltage U_i
Slow-make switching element 660 V
Lamp element 250 V
Lamp transformer 660 V

Rated Operational Voltage U_e
AC 15 (inductive)
120 V, ~6 A
230 V, ~6 A
400 V, ~4 A
500 V, ~3 A
600 V, ~1.2 A
DC 13
24 V, 3 A
60 V, 1.3 A
120 V, 0.6 A
250 V, 0.3 A

Rated Impulse Withstand Voltage U_{imp}
Lamp element 2,5 kV
Lamp transformer 6 kV
Slow-make switching element 6 kV*
* between the electrically separated normally closed contacts and normally open contacts for slow-make switching elements.
1 NC + 1 NO without overlap
U_e >400 V, same polarity
U_{imp} = 4000 V
1 NC + 1 NO with overlap
U_e >250 V, same polarity
U_{imp} = 4000 V

Rated Operational Current I_e
AC-12 (resistive)
500 V, ~5 A
DC-12
24 V, 10 A
60 V, 8 A
125 V, 3 A
250 V, 1 A

Contact resistance
Starting value (initial) ≤50 mΩ

Electrical life
AC-15
400 V, ~2 A, 1 x 10^6 switching operations

Conventional free air thermal current
Ith_2 = 10 A

Short-circuit protection
max. series fuse to be provided 10 A gL
lamp transformer is short-circuit-proofed

Switch rating

Ag-Ni alloy	
(Standard version)	minimal 6 V, 20 mA
	minimal 12 V, 10 mA
Gold/Silver	
(Special version)	minimal 5 V, 1 mA
	maximum 42 V, 100 mA

Degree of pollution
3, as per EN IEC 60947-1

Environmental conditions

Storage temperature
-40 °C ... +70 °C

Operating temperature
-25 °C, as per EN IEC 60068-2-1
+60 °C, as per EN IEC 60068-2-2

Protection degree
Actuators at front and enclosure IP 65, as per EN IEC 60529

Shock resistance
40 g (duration 6 ms), as per EN IEC 60 68-2-27

Vibration resistance
sinusoidal, 5 g at 10-500 Hz, as per EN IEC 60068-2-6

Climate resistance
Humidity and heat constant, as per EN IEC 60068-2-3
Humidity and heat cyclic, as per EN IEC 60068-2-30

Approvals

Approbations
CSA
Germanischer Lloyd
UL
VDE

Declaration of conformity
CE
RoHS

Actuator

Material

Adapter and enclosure
PC

Front parts
PA 6, PA 12, PC, chromium-plated ABS

Snap-action switching element Control Switch

Switching system

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

Material

Housing
Polyethylene terephthalate (PETP), as per UL 94 V0

Contacts
AgNi, 2 µm gold plated

Contact carrier
Brass or CuBe

Mechanical characteristics

Terminals
Soldering terminal (also pluggable 2.8 x 0.5 mm), Brass gold plated
Wire cross-section 1.0 mm^2 max.

Actuating force
For each snap-action switching element approx. 2 N

Rebound time
typically 0.5 µs

Contact opening width
2 x 0.65 mm

Contact cleaning path
2 x 0.6 mm

Mechanical lifetime
2 million cycles of operation

Electrical characteristics

Contact resistance
New state with gold plated contact ≤50 mΩ, statically

Electrical life
>10 000 cycles of operation

Switch rating
as per EN IEC 61058-1
250 VAC, 5 A cosϕ 0.7 ... 0.8
250 VDC, 0.5 A
110 VDC, 2A
75 VDC, 5 A
5 VAC/DC, 1 mA min.

Approvals

Approbations
CSA
ENEC (EN 61058)
UL
VDE

Declaration of conformity
CE
RoHS

Control Switch

General

Design
Modular, Actuator and Switch part separated

Operation
2-/ 4-/ 8-positions, each approx. 12°

Mounting position
In any way

Mechanical characteristics

Mechanical lifetime
2 million cycles of operation

Environmental conditions

Storage temperature
-40 °C ... +85 °C, as per EN IEC 60068

Operating temperature
-25 °C ... +55 °C, as per EN IEC 60068-2

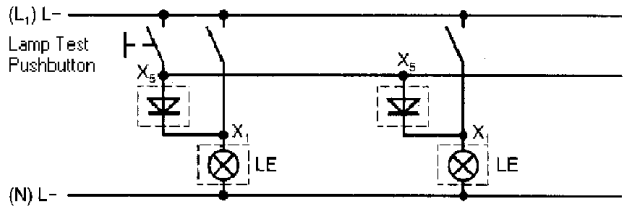
Protection degree
IP 65 front side, as per IEC 60529

Shock resistance
40 g, 6 ms regarding mechanical destruction

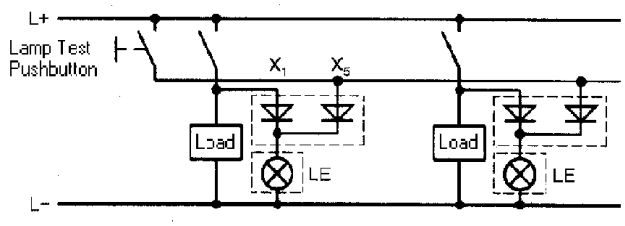
Climate resistance
Damp heat state/cyclic as per EN IEC 60068-2

Wiring diagrams for central lamp test

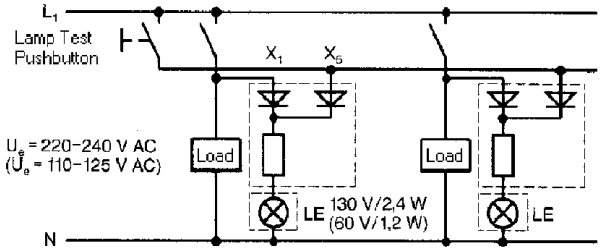
Diode element with 1 diode



Diode element with 2 diode



Diode resistance element



- Only apply incandescent lamps with special data !
  Incandescent lamp 130 V, 2.4 W, Typ-Nr. 10-1423.1179
  Incandescent lamp 60 V, 1.2 W, Typ-Nr. 10-1420.1179
- Max. environmental temperature 40 °C for Resistor diode element Typ-Nr. 44-614.11 und 44-614.21
- For base mounting of the diode element Typ-Nr. 44612.2 the connection wire which just comes out in the middle must be placed so that it does not interfere with the actuator system.

Suppressor circuits

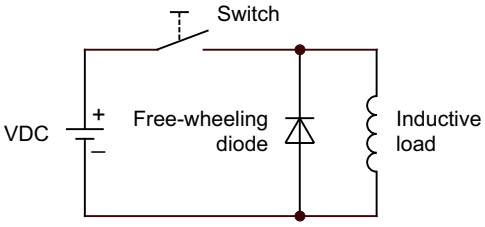
When switching inductive loads such as relays, DC motors, and DC solenoids, it is always important to absorb surges (e.g. with a diode) to protect the contacts. When these inductive loads are switched off, a counter emf can severely damage switch contacts and greatly shorten lifetime.

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

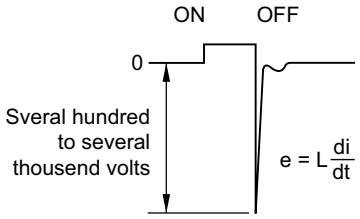
The free-wheeling diode should be chosen so that the reverse breakdown voltage is greater than the voltage driving the inductive load. The DC blocking voltage (VR) of the free-wheeling diode can be found in the datasheet of a diode. The forward current should be equal or greater than the maximum current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

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

Switching with inductive load
Fig. 1



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



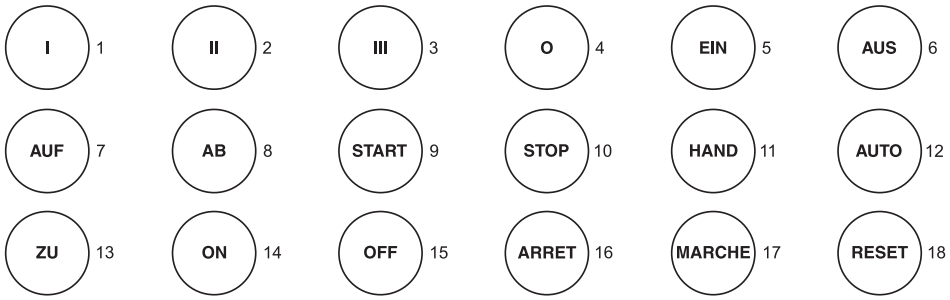
Label marking for label support

Label black anodized

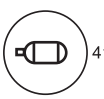
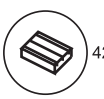
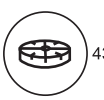
Standard text	Text-No.	Standard text	Text-No.	Standard text	Text-No.
0	T 01	Forwards	T 14	Set up	T 22
I	T 02	Revers	T 15	Raise	T 23
0 I	T 03	Right	T 16	Lower	T 24
I 0 II	T 04	Left	T 17	Hand	T 25
OFF	T 10	Halt	T 18	STOP	T 26
ON	T 11	Close	T 19	START	T 27
Up	T 12	Fast	T 20	HAND/AUTO	T 28
Down	T 13	Slow	T 21	OFF/ON	T 29

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

Height of letters 6 mm



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

	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 Speed 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 Lock or tighten
	8 Rotation in 2 directions		21 Normal feed		42 Rectangular work table or slide element		63.2 Lock 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

Continuation see next page

Continued from previous page


69 Start, on


70 Stop, off


71 Start and stop with same button


72 In action as long as button is operated


74 Engaging (mechanical start)


75 Disengaging (mechanical stop)


76 Close lock-nut


77 Open lock-nut


78 Engage sensor


79 Disengage sensor


80 Change speed only in stopped position


81 Change speed only in motion


91 Shear pin construction


92 Danger (high voltage)


93 Caution!


94 Main switch


101 Coolant fluid


102 Machine lighting


103 Weight


104 Filter opening


105 Overflow


106 Drain

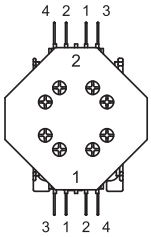

107 Oil, lubricant


108 Blast

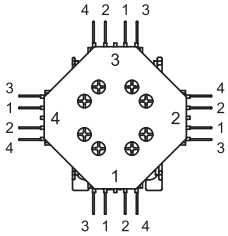

109 Suction

Component layout

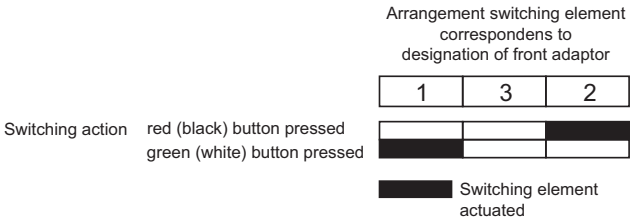
1 Control switch page 11



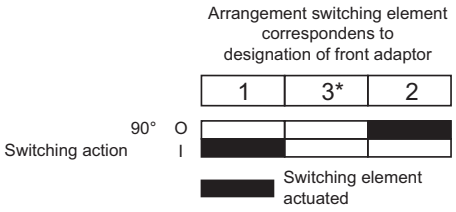
2 Control switch page 11



3 Double pushbutton actuator page 18

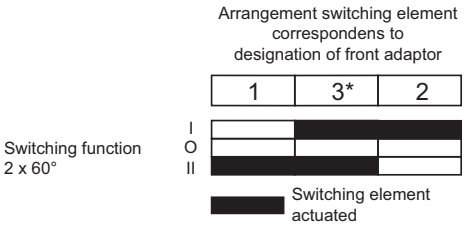


4 Keylock switch actuator 2 positions page 21 **| Selector switch actuator 2 positions** page 23 **| Keylock switch actuator 2 positions, flush mounting** page 33 **| Selector switch actuator 2 positions, flush mounting** page 35



* By using of not stackable switching elements, please cover the outside positions 1 and 2 of front adptor

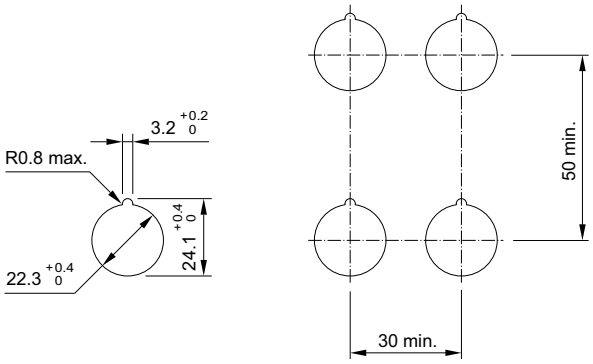
5 Keylock switch actuator 3 positions page 22 **| Selector switch actuator 3 positions** page 24 **| Keylock switch actuator 3 positions, flush mounting** page 34 **| Selector switch actuator 3 positions, flush mounting** page 36



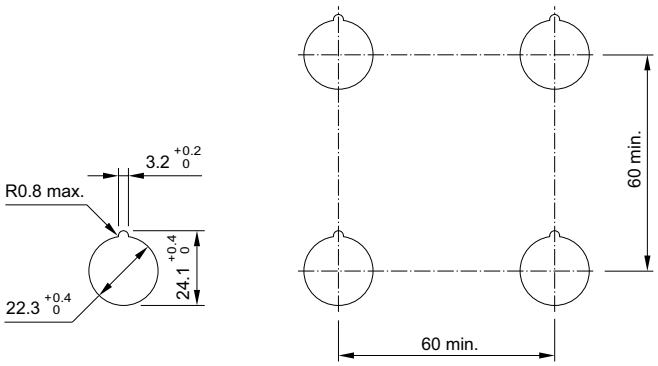
* By using of not stackable switching elements, please cover the outside positions 1 and 2 of front adptor

Mounting dimensions

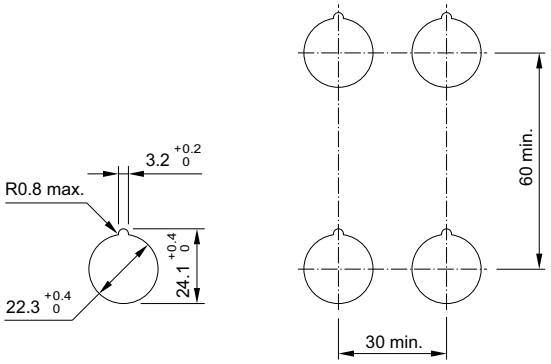
1 Indicator full-face illumination complete page 6 **| Indicator front illumination complete** page 6 **| Pushbutton complete** page 7 **| Illuminated pushbutton complete** page 7 **| Key lock switch 2 positions complete** page 9 **| Key lock switch 3 positions complete** page 9 **| Selector switch 2 positions complete** page 10 **| Selector switch 3 positions complete** page 10 **| Indicator actuator full-face illumination** page 12 **| Indicator actuator front illumination** page 13 **| Pushbutton actuator** page 14 **| Pushbutton actuator markable** page 16 **| Illuminated pushbutton actuator** page 17 **| Keylock switch actuator 2 positions** page 21 **| Keylock switch actuator 3 positions** page 22 **| Selector switch actuator 2 positions** page 23 **| Selector switch actuator 3 positions** page 24 **| Interlocking pushbutton actuator** page 25 **| Potentiometer-drive** page 26 **| Blind plug** page 41



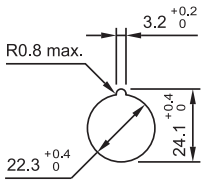
2 Emergency-stop pusbutton, foolproof EN IEC 60947-5-5, complete page 8 **| Stop pushbutton, complete** page 8 **| Emergency-stop pushbutton actuator, foolproof EN IEC 60947-5-5** page 19 **| Stop pushbutton actuator** page 20 **| Mushroom-head pushbutton actuator** page 21



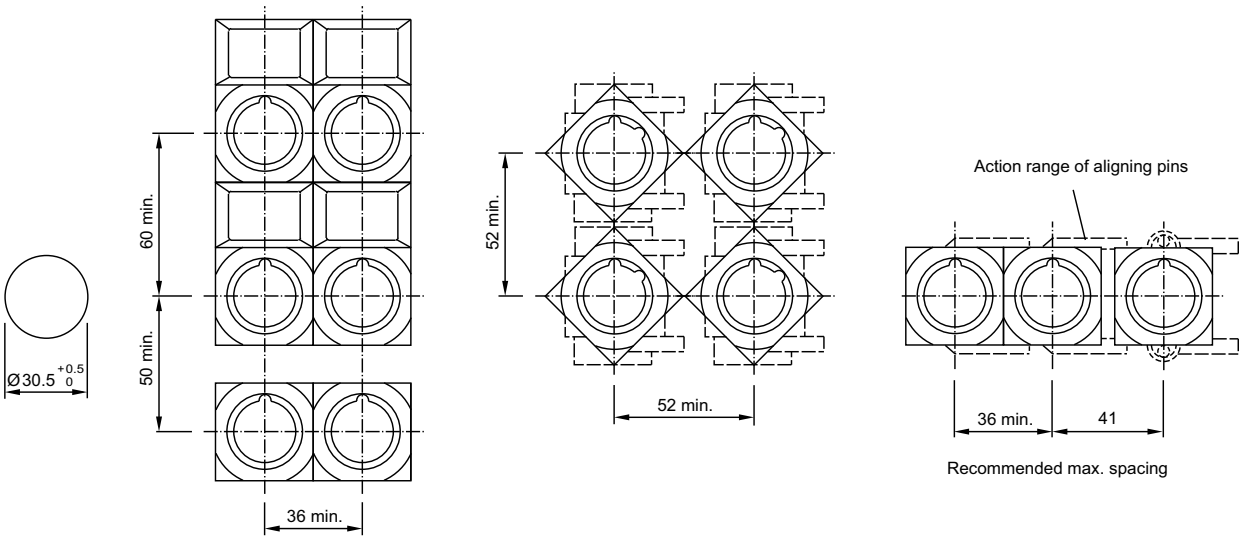
3 Double pushbutton actuator page 18



4 Control switch page 11

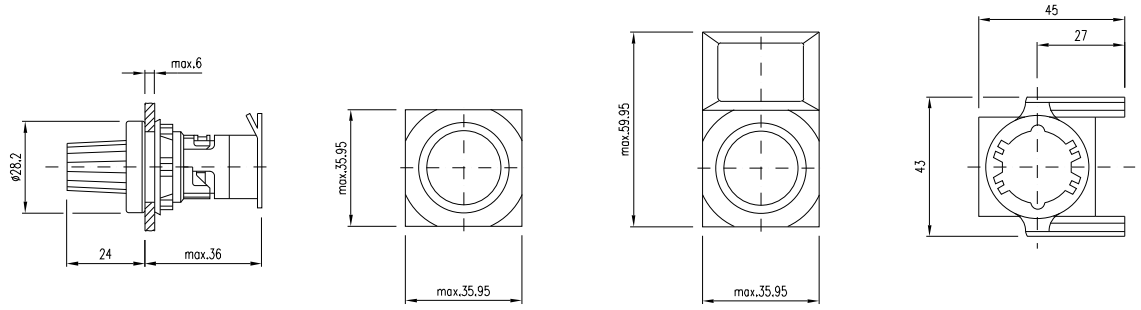


5 Indicator actuator full face illumination, flush mounting page 27 **| Indicator actuator front illumination, flush mounting** page 28 **| Pushbutton actuator, flush mounting** page 29 **| Pushbutton actuator markable, flush mounting** page 31 **| Illuminated pushbutton actuator, flush mounting** page 32 **| Keylock switch actuator 2 positions, flush mounting** page 33 **| Keylock switch actuator 3 positions, flush mounting** page 34 **| Selector switch actuator 2 positions, flush mounting** page 35 **| Selector switch actuator 3 positions, flush mounting** page 36 **| Interlocking pushbutton actuator, flush mounting** page 37 **| Potentiometer-drive, flush mounting** page 37

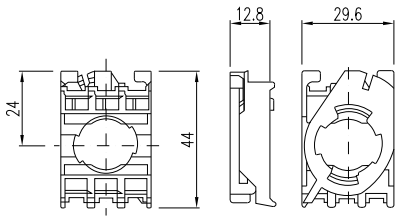


Technical drawing

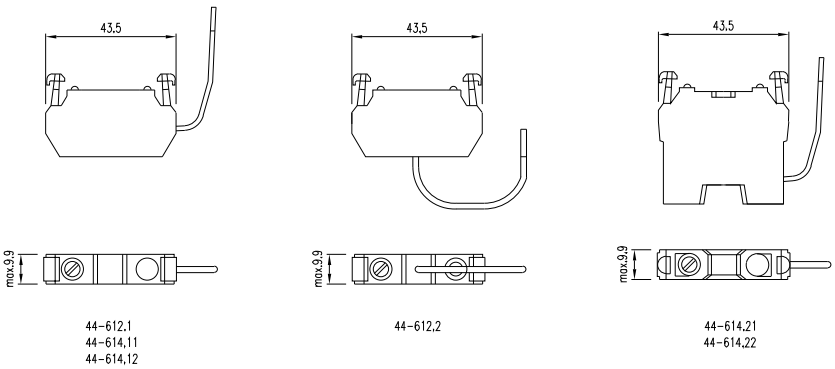
1 Potentiometer-drive, flush mounting page 37



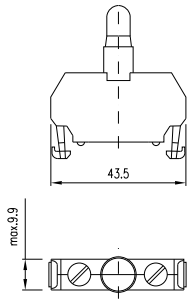
2 Front adapter, front mounting page 42



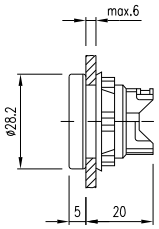
3 Resistor diode element page 46 **| Diode element** page 46



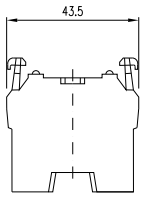
4 Lamp, base mounting page 44



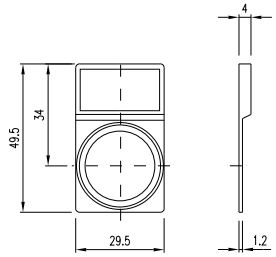
5 Blind plug page 41



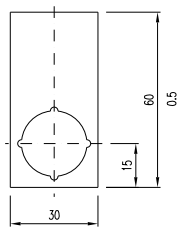
6 Blind element page 44



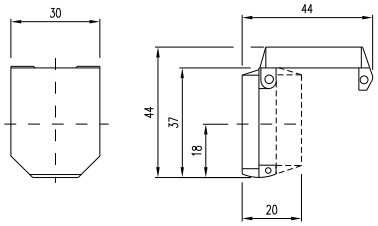
7 Label support without label page 39 **| Label support with label** page 40



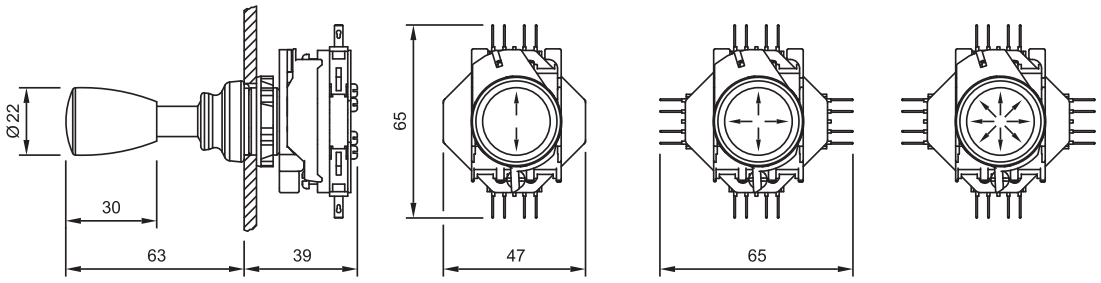
8 Legend plate page 39



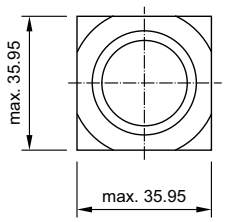
9 Protective cover page 40



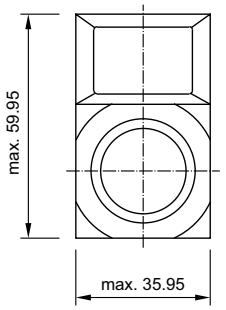
10 Control switch page 11



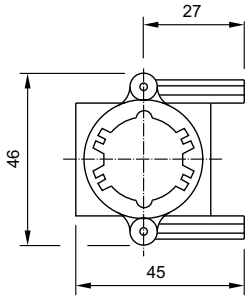
11 Pushbutton actuator, flush mounting page 29



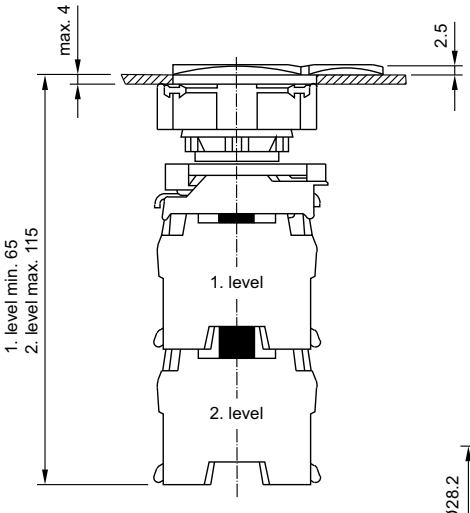
Front bezel

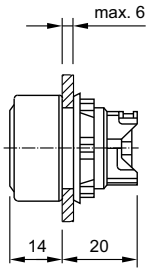


Front bezel
with label support

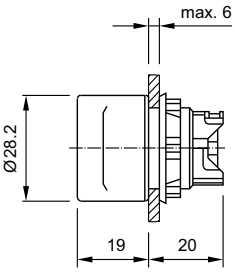


Fixing element

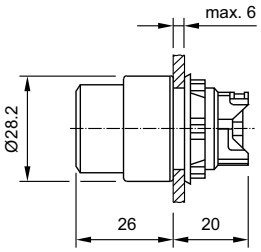




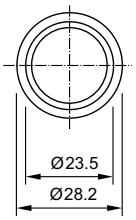
Lens
level with bezel



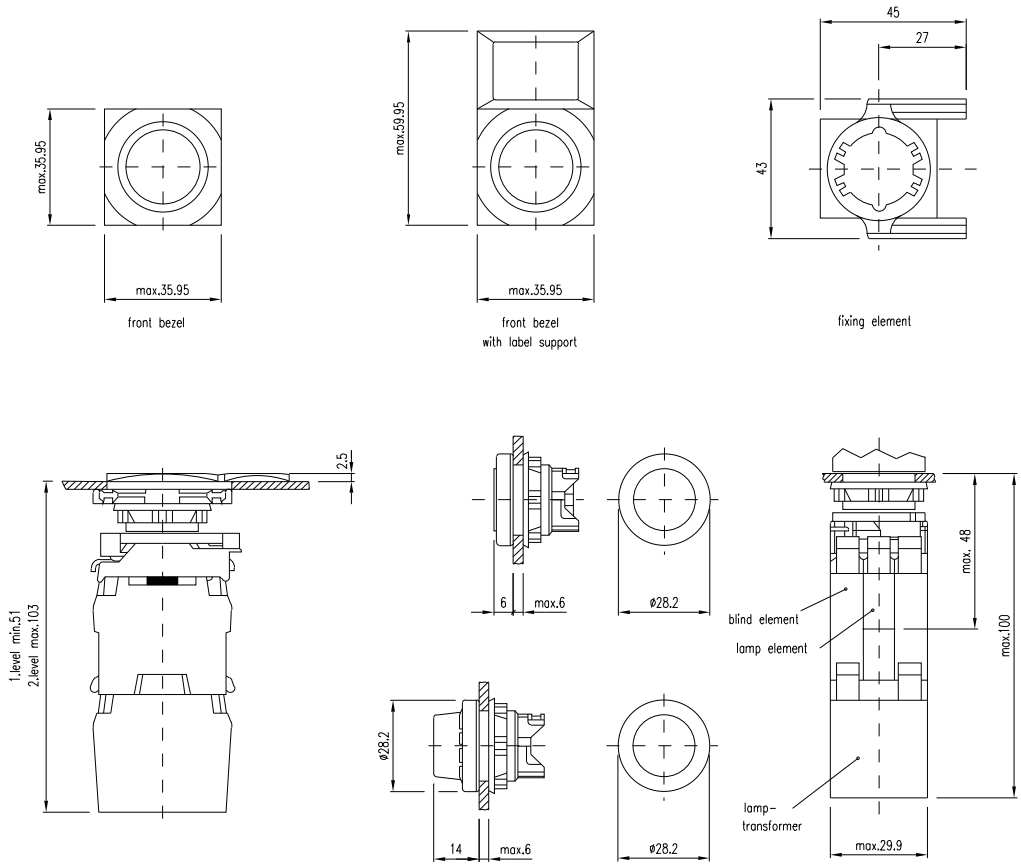
Lens
lower than bezel



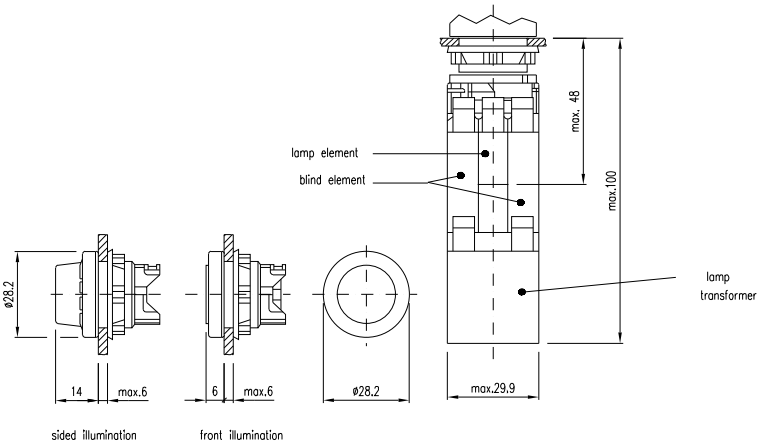
Lens
raised above bezel



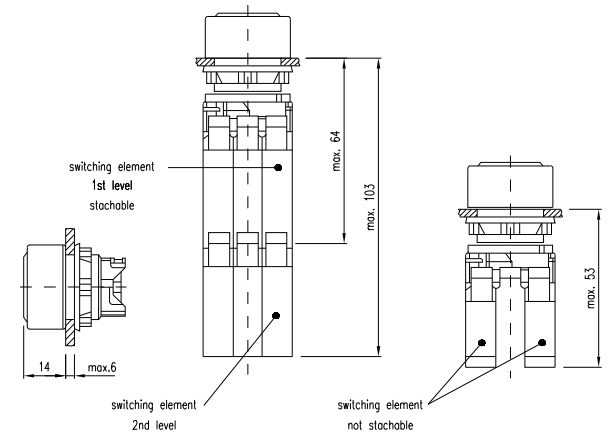
12 Indicator actuator full face illumination, flush mounting page 27 **| Indicator actuator front illumination, flush mounting** page 28



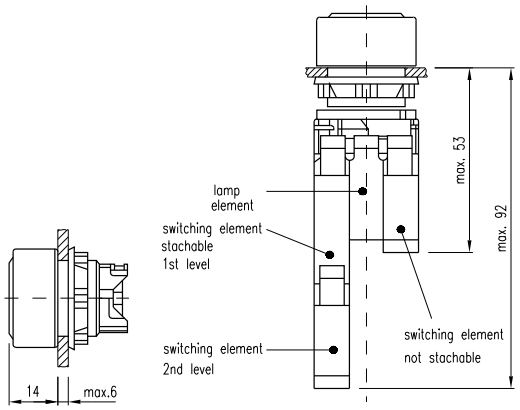
13 Indicator full-face illumination complete page 6 **| Indicator front illumination complete** page 6



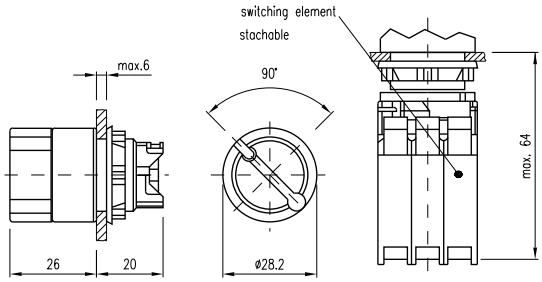
14 Pushbutton complete page 7



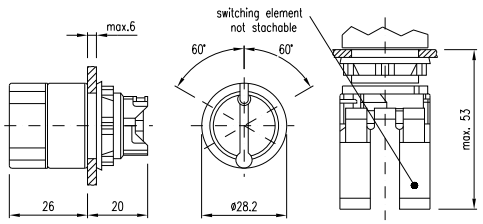
15 Illuminated pushbutton complete page 7



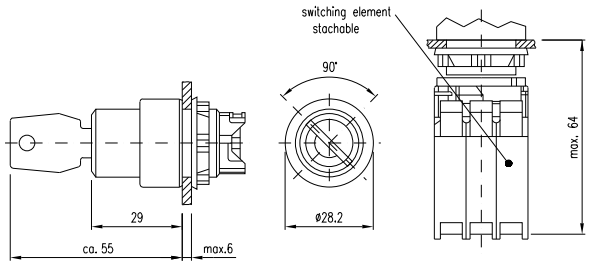
16 Selector switch 2 positions complete page 10



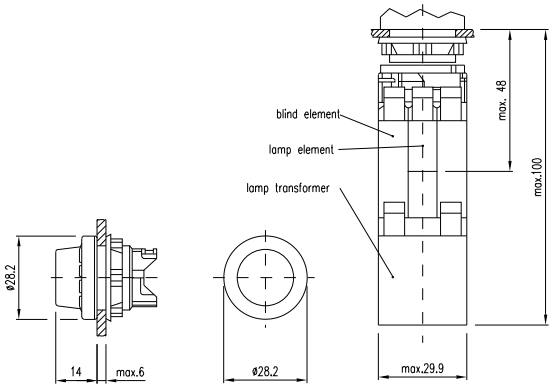
17 Selector switch 3 positions complete page 10



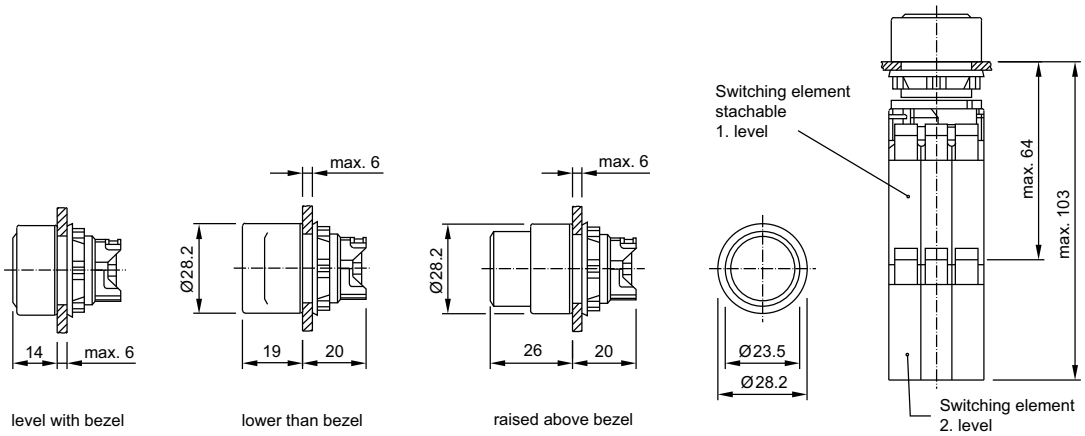
18 Key lock switch 2 positions complete page 9



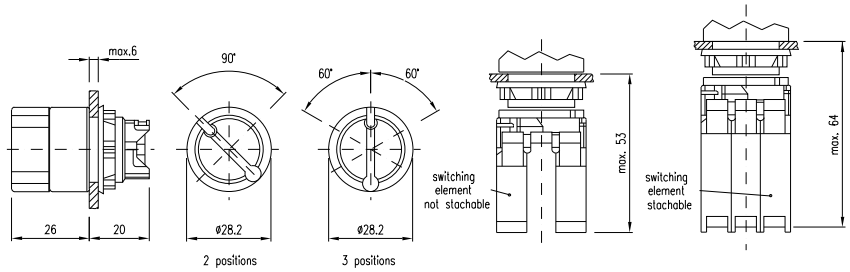
19 Indicator actuator full-face illumination page 12



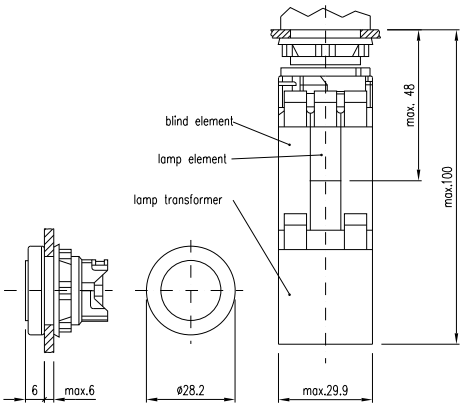
20 Pushbutton actuator page 14



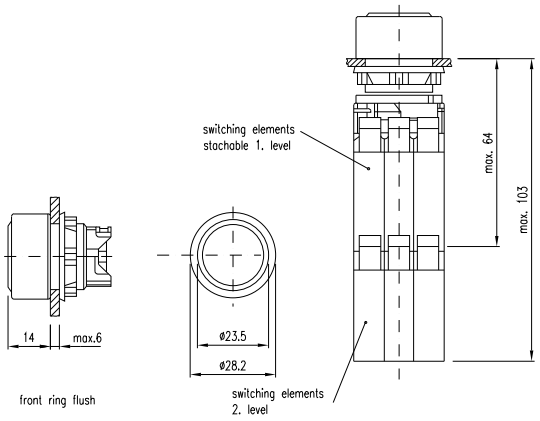
21 Selector switch actuator 2 positions page 23 **| Selector switch actuator 3 positions** page 24



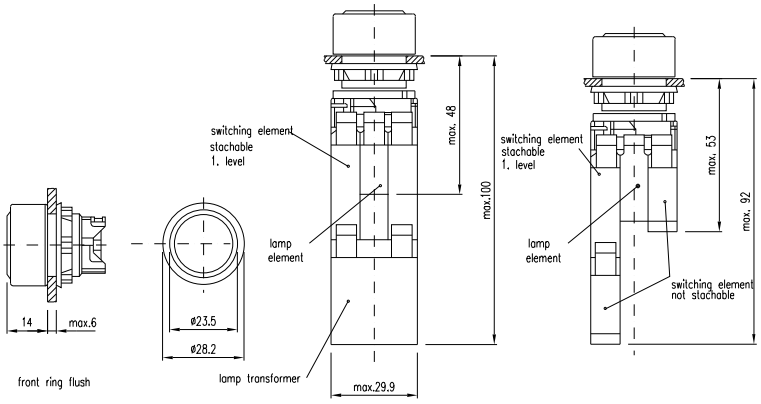
22 Indicator actuator front illumination page 13



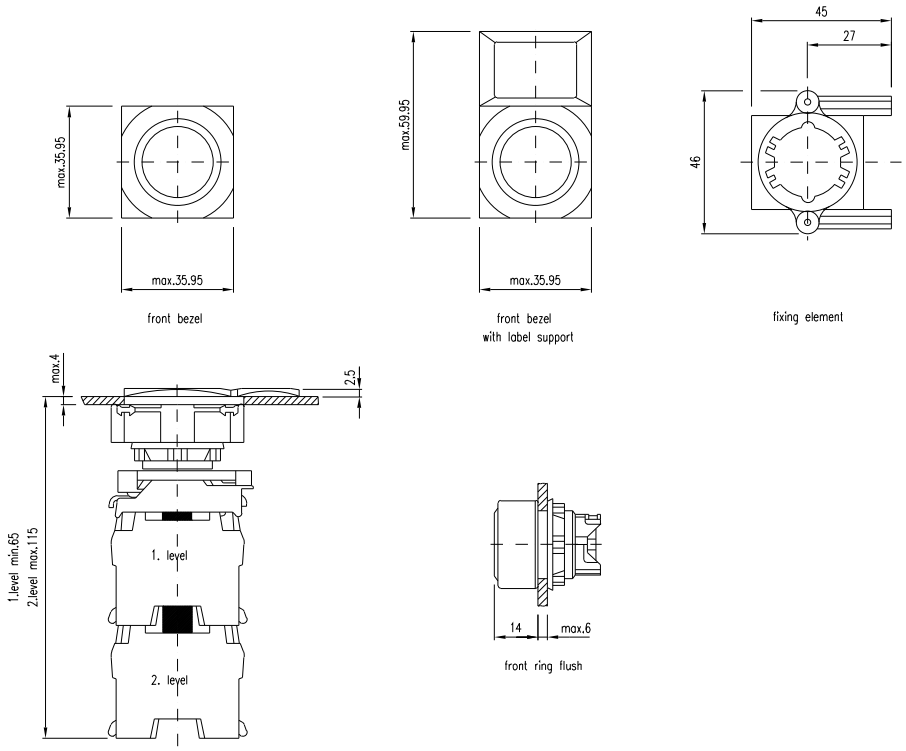
23 Pushbutton actuator markable page 16



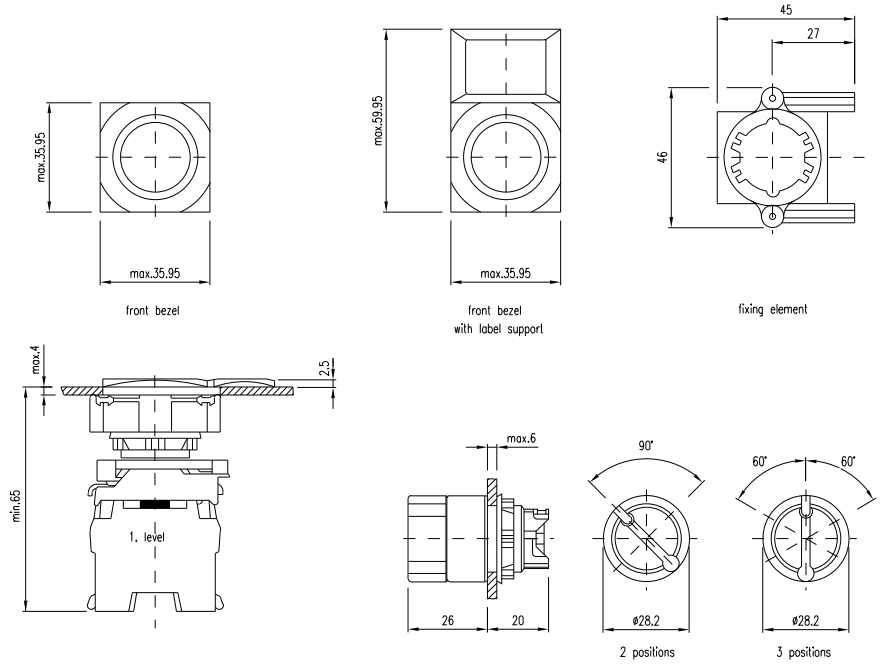
24 Illuminated pushbutton actuator page 17



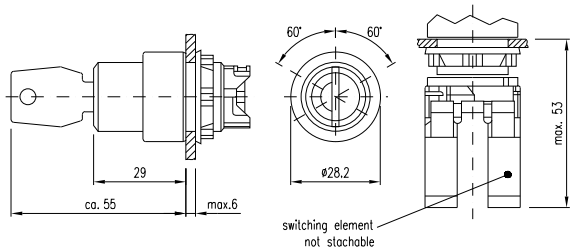
25 Pushbutton actuator markable, flush mounting page 31 **| Illuminated pushbutton actuator, flush mounting** page 32



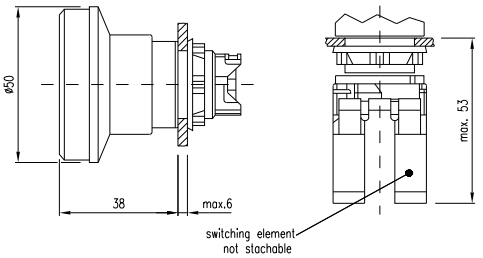
26 Selector switch actuator 2 positions, flush mounting page 35 **| Selector switch actuator 3 positions, flush mounting** page 36



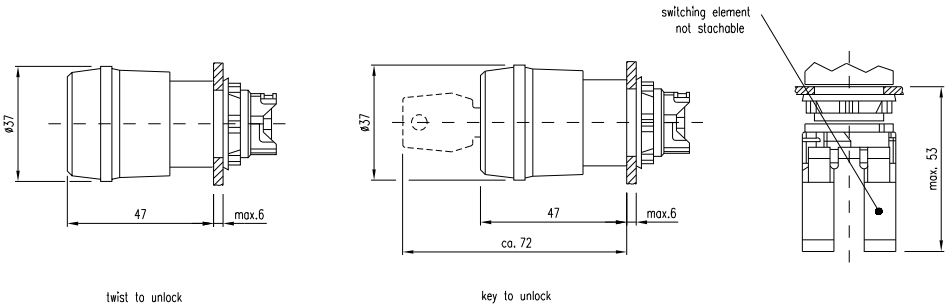
27 Key lock switch 3 positions complete page 9



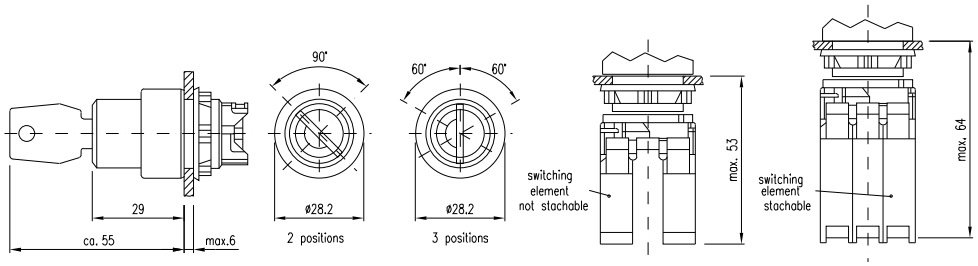
28 Stop pushbutton, complete page 8



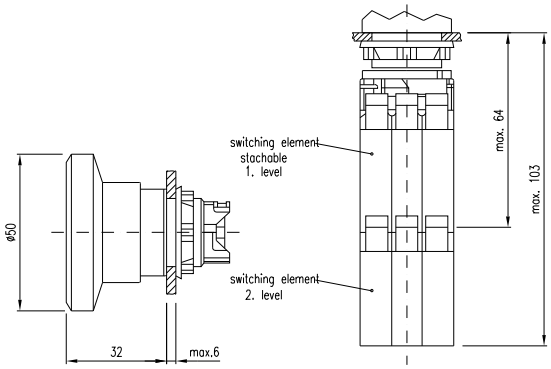
29 Emergency-stop pusbutton, foolproof EN IEC 60947-5-5, complete page 8



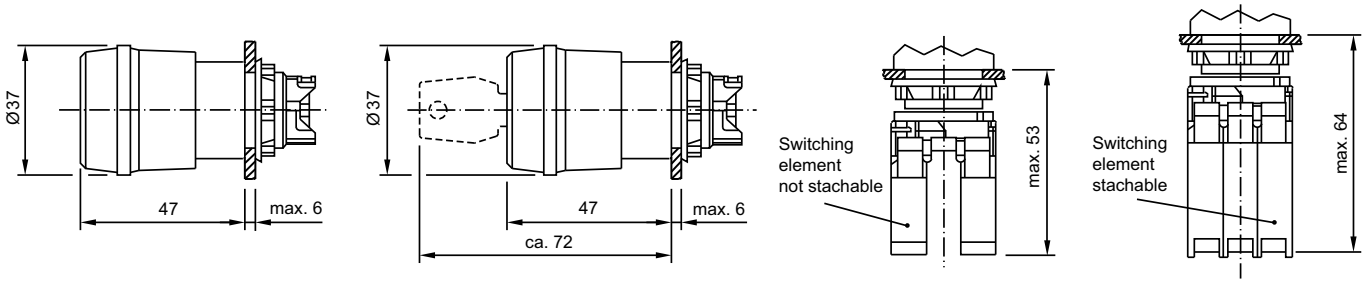
30 Keylock switch actuator 2 positions page 21 **| Keylock switch actuator 3 positions** page 22



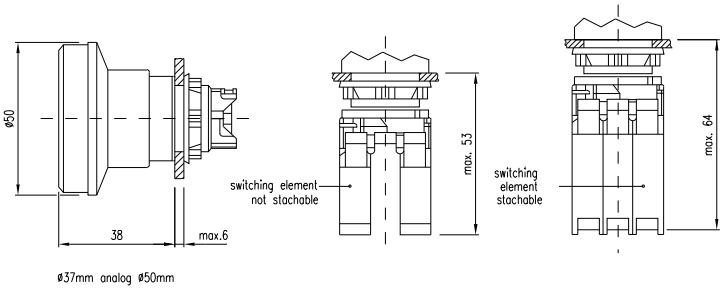
31 Mushroom-head pushbutton actuator page 21



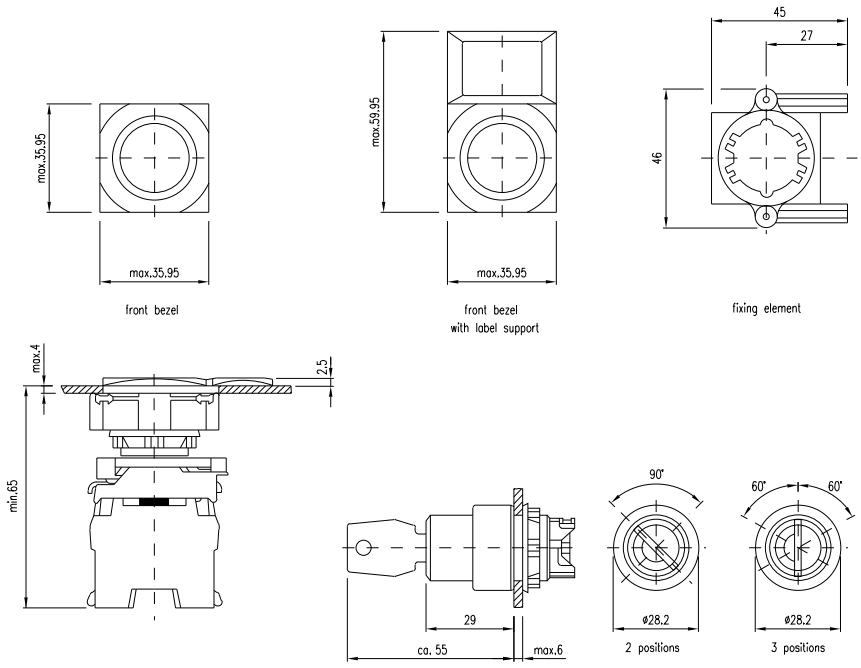
32 Emergency-stop pushbutton actuator, foolproof EN IEC 60947-5-5 page 19



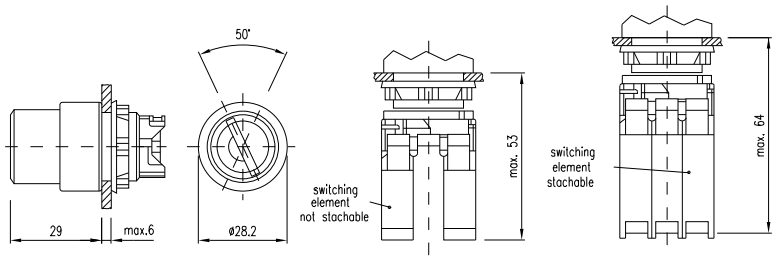
33 Stop pushbutton actuator page 20



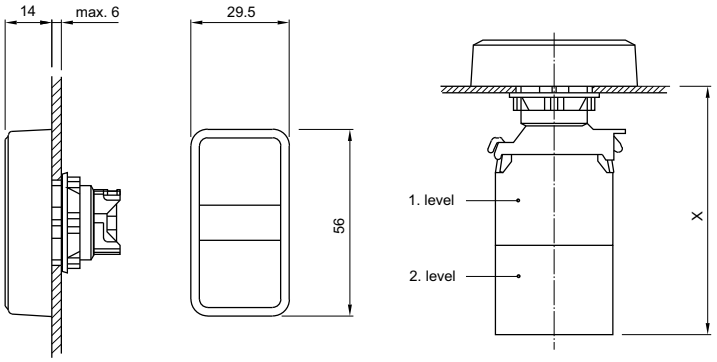
34 Keylock switch actuator 2 positions, flush mounting page 33 **| Keylock switch actuator 3 positions, flush mounting** page 34



35 Interlocking pushbutton actuator page 25

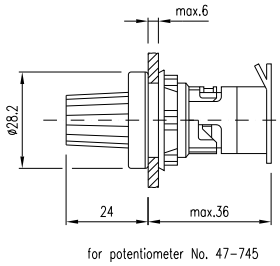


36 Double pushbutton actuator page 18

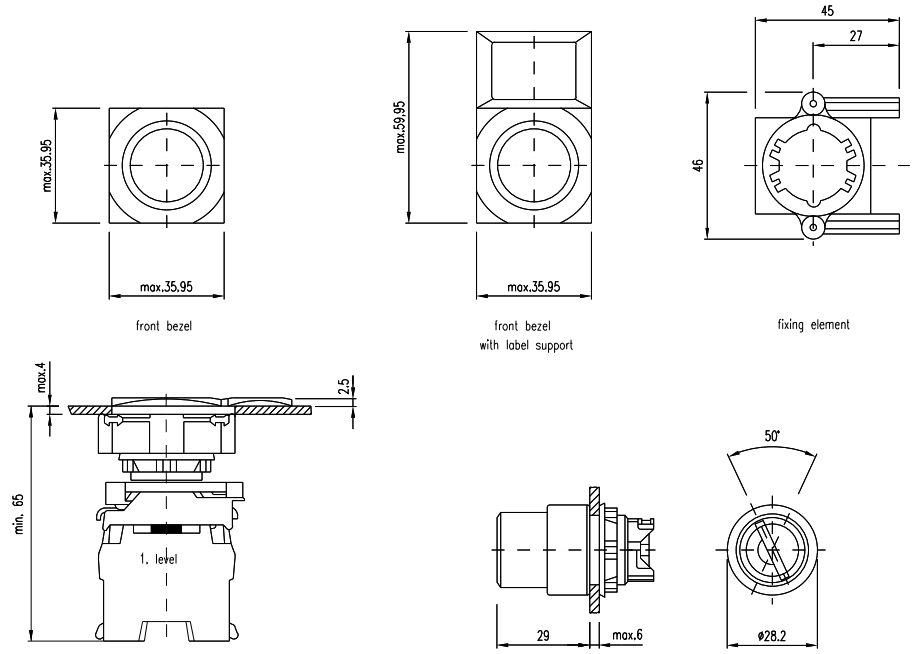


Mounting depth X [mm]	1. level	2. level
max. 53	44-111/ 44-121	-
max. 64	44-111- 44-162	-
max. 92	44-131- 44-162	44-111/ 44-121
max. 100	44-131- 44-162	44-970- 44-977
max. 103	44-131- 44-162	44-131- 44-162

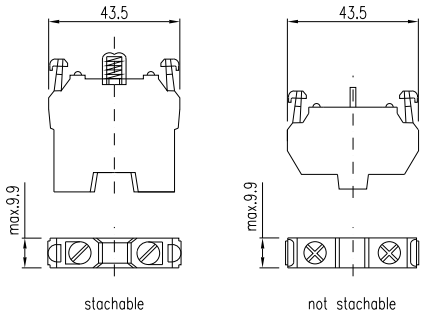
37 Potentiometer-drive page 26



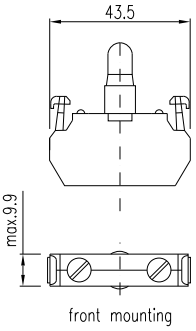
38 Interlocking pushbutton actuator, flush mounting page 37



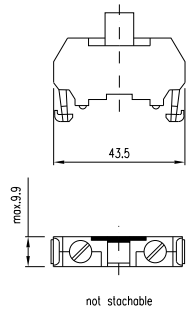
39 Slow-make switching element stackable, front mounting page 42 **| Slow-make switching element non-stachable, front mounting** page 43



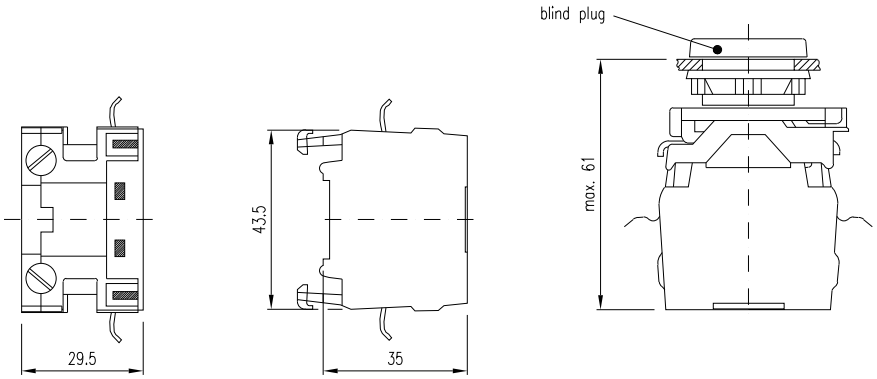
40 Lamp element, front mounting page 43



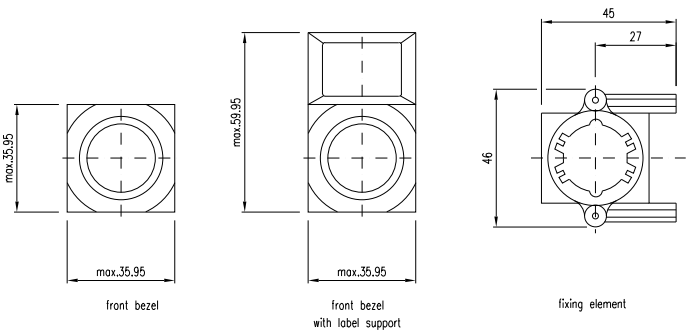
41 Slow-make switching element non-stackable, base mounting page 43



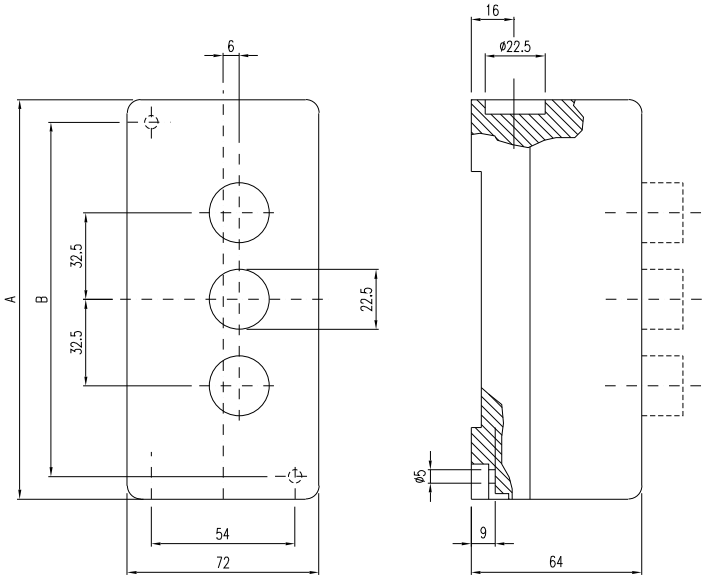
42 Lamp transformer page 46



43 Front bezel set without label support, flush mounting page 38 **| Front bezel set with label support, flush mounting** page 39



44 Emergency-stop enclosure page 19 **| Stop pushbutton enclosure** page 20 **| Pushbutton enclosure** page 25 **| Emergency-stop enclosures** page 48 **| Enclosure** page 48



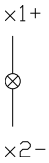
No. buttons	A	B
1	84	67
2	117	100
3	150	133
5	215	198

Circuit drawing

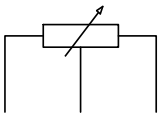
1 Pushbutton actuator page 14 **| Pushbutton actuator markable** page 16 **| Pushbutton actuator, flush mounting** page 29 **| Pushbutton actuator markable, flush mounting** page 31

2 Pushbutton actuator page 14 **| Pushbutton actuator markable** page 16 **| Mushroom-head pushbutton actuator** page 21 **| Pushbutton actuator, flush mounting** page 29 **| Pushbutton actuator markable, flush mounting** page 31

3 Indicator full-face illumination complete page 6 **| Indicator front illumination complete** page 6 **| Lamp element, front mounting** page 43 **| Lamp, base mounting** page 44

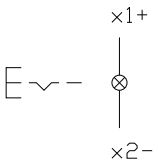


4 Potentiometer-drive page 26 **| Potentiometer-drive, flush mounting** page 37

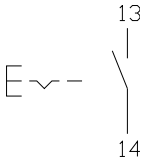


5 Emergency-stop pushbutton actuator, foolproof EN IEC 60947-5-5 page 19 **| Stop pushbutton actuator** page 20

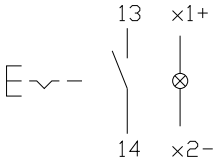
6 Illuminated pushbutton actuator page 17 **| Illuminated pushbutton actuator, flush mounting** page 32



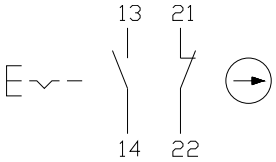
7 Pushbutton complete page 7



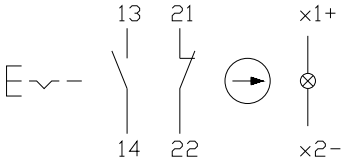
8 Illuminated pushbutton complete page 7



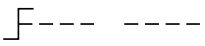
9 Pushbutton complete page 7



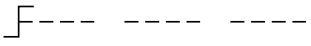
10 Illuminated pushbutton complete page 7



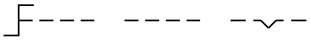
11 Selector switch actuator 2 positions page 23 **| Selector switch actuator 2 positions, flush mounting** page 35



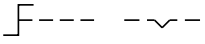
12 Selector switch actuator 3 positions page 24 **| Selector switch actuator 3 positions, flush mounting** page 36



13 Selector switch actuator 3 positions page 24 **| Selector switch actuator 3 positions, flush mounting** page 36



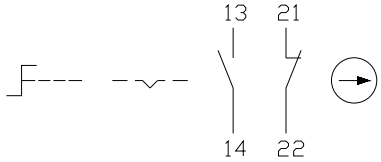
14 Selector switch actuator 2 positions page 23 **| Selector switch actuator 2 positions, flush mounting** page 35



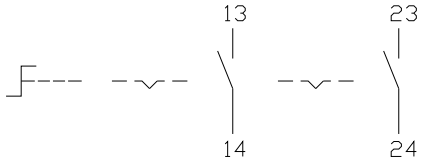
15 Selector switch actuator 3 positions page 24 **| Selector switch actuator 3 positions, flush mounting** page 36

16 Selector switch actuator 3 positions page 24 **| Selector switch actuator 3 positions, flush mounting** page 36

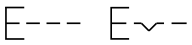
17 Selector switch 2 positions complete page 10



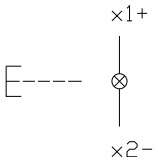
18 Selector switch 3 positions complete page 10



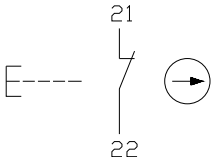
19 Interlocking pushbutton actuator page 25 **| Interlocking pushbutton actuator, flush mounting** page 37



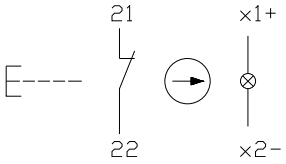
20 Illuminated pushbutton actuator page 17 **| Illuminated pushbutton actuator, flush mounting** page 32



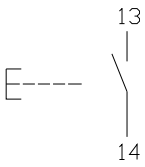
21 Pushbutton complete page 7



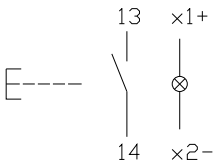
22 Illuminated pushbutton complete page 7



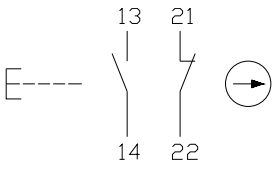
23 Pushbutton complete page 7



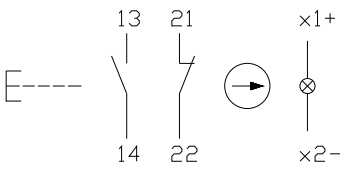
24 Illuminated pushbutton complete page 7



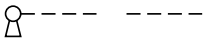
25 Pushbutton complete page 7



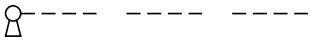
26 Illuminated pushbutton complete page 7



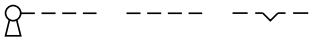
27 Keylock switch actuator 2 positions page 21 **| Keylock switch actuator 2 positions, flush mounting** page 33



28 Keylock switch actuator 3 positions page 22 **| Keylock switch actuator 3 positions, flush mounting** page 34



29 Keylock switch actuator 3 positions page 22 **| Keylock switch actuator 3 positions, flush mounting** page 34

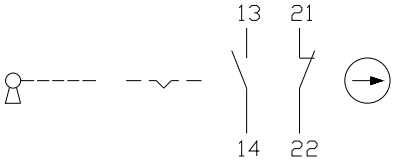


30 Keylock switch actuator 2 positions page 21 **| Keylock switch actuator 2 positions, flush mounting** page 33

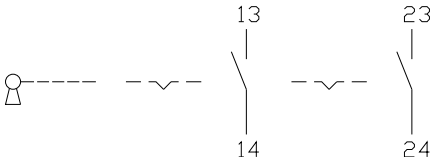
31 Keylock switch actuator 3 positions page 22 **| Keylock switch actuator 3 positions, flush mounting** page 34

32 Keylock switch actuator 3 positions page 22 **| Keylock switch actuator 3 positions, flush mounting** page 34

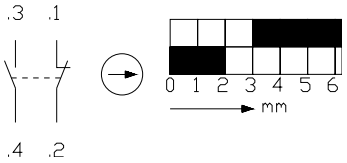
33 Key lock switch 2 positions complete page 9



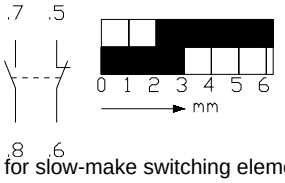
34 Key lock switch 3 positions complete page 9



35 Slow-make switching element stackable, front mounting page 42

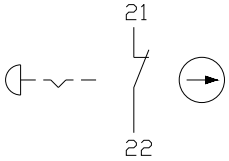


36 Slow-make switching element stackable, front mounting page 42

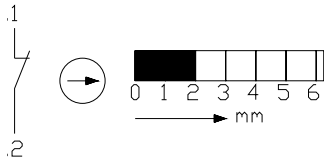


for slow-make switching element Typ-Nr. 44-141

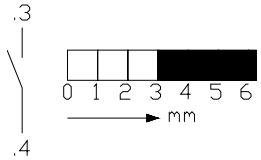
37 Emergency-stop pusbutton, foolproof EN IEC 60947-5-5, complete page 8 **| Stop pushbutton, complete** page 8



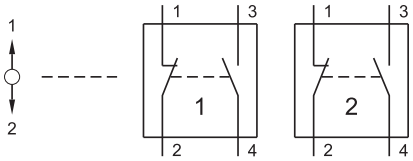
38 Slow-make switching element stackable, front mounting page 42 **| Slow-make switching element non-stachable, front mounting** page 43 **| Slow-make switching element non-stackable, base mounting** page 43



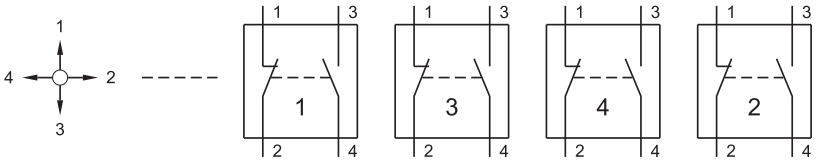
39 Slow-make switching element stackable, front mounting page 42 **| Slow-make switching element non-stachable, front mounting** page 43 **| Slow-make switching element non-stackable, base mounting** page 43



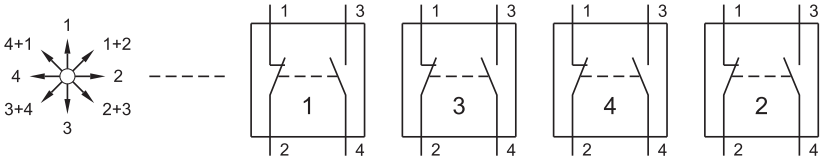
40 Control switch page 11



41 Control switch page 11



42 Control switch page 11



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