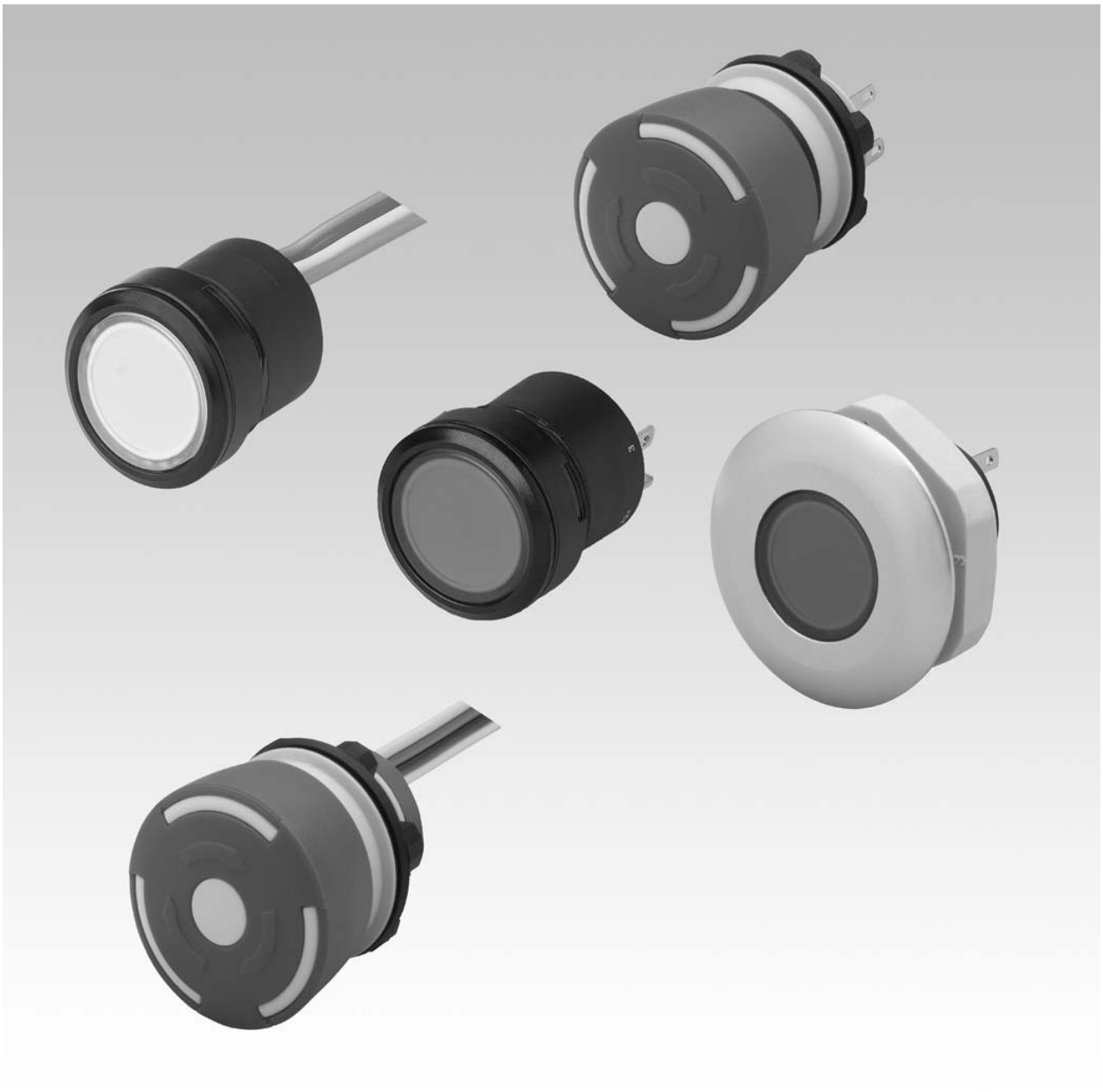
EAO Product Information

Series 84



Contents

Product Information

General notes
The Series 84 consists of indicators, pushbuttons and emergency-stop switches. The indicators and pushbuttons are a modular system of lens, actuator, switching element and a variety of means of connection and mounting. Different front protection of IP 67, IP 65 or IP 40 ensure that the pushbuttons are suited for industrial use.
Anodized aluminium parts can have visible variations due production-technical reasons.

Mounting
The actuators of the Series 84 are inserted in a 22.5 mm diameter mounting hole and the switching units are clipped on to the rear of the actuators. The pushbutton system can be mounted as a complete unit (actuator and switching unit). Mounting from the front with the wiring already attached is also possible.
When mounted on printed circuit boards the actuators are inserted in the mounting hole 22.5 mm dia. and the switching elements are fixed on the board. The printed circuit board is connected to the preassembled actuator by means of the mounting flange. There is no need for subsequent adjustment or spacing studs.

Lenses
The lenses are available in various colours and made either from plastic or anodized aluminium.

Marking
The marking plates of the Series 84 can be marked by engraving or hot stamping.
Specific symbols and markings are available on request.
The lenses are without holder not engravable, since by mounting no accurate position of the engraving text is reached.
Specific symbols and markings are available on request.

Illumination
To ensure full illumination, the switching elements can be supplied with integrated Single- or Multi-LEDs in the colours red, orange, yellow, green, blue or white. The series resistor is integrated.
Luminosity and wave length scattering caused by the technology used in the LED manufacturing processes may lead to visual differences in our products.

Emergency-stop pushbutton, foolproof
The E-stop pushbutton can be mounted in front panels with a thickness between 1 and 4 mm. It has a low behind-panel depth of 13.5 mm (max.) and 18.5 mm with plug-in terminlas and can be safely and easily adapted to PCBs of different heights. The front protection degree is IP 65.
Importantly, the Series 84 emergency-stop requires no additional assembly because of its single-piece 'monoblock' design.
The switch's status is clearly indicated by a black or green colour ring on the shaft, and the foolproof actuator design conforms to DIN EN ISO 13850 and EN IEC 60947.
It can be supplied with LED illumination that is visible even from the side.

Specimen order

Indicator :

- Indicator actuator, IP 67	84-0100.0

Essential accessories :

- Lens plastic blue	84-7111.600
- Indicator element Single-LED blue 24 VDC, plug-in terminal	84-8001.6620

or

Indicator with PCB terminal :

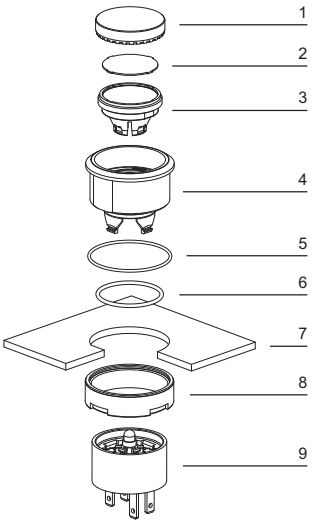
- Indicator actuator, IP 67	84-3100.1

Essential accessories :

- Lens plastic red	84-7111.200
- Indicator element with PCB terminal	92-800.042
- Single-LED red 2.2 VDC	10-2602.3172D
- Mounting flange	92-960.0

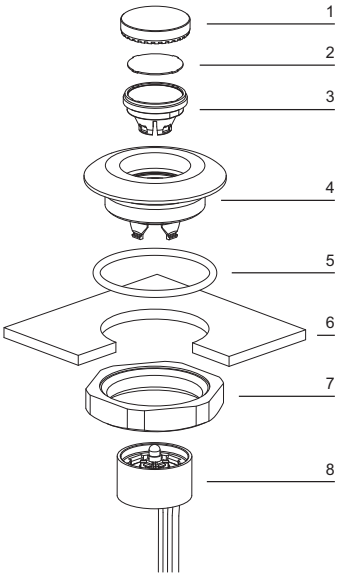
We reserve the right to modify technical data
All dimensions in mm

Indicator and pushbutton illuminative, 25 mm dia.



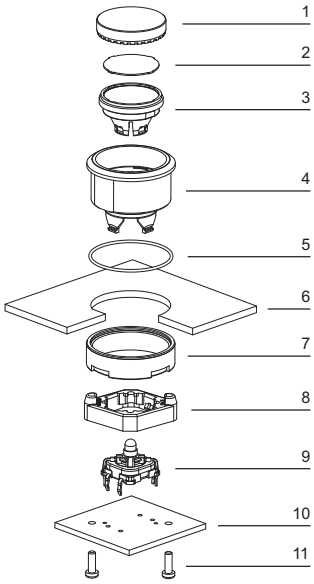
1 Lens
2 Marking plate
3 Lens holder
4 Actuator housing
5 Outer sealing
6 Inner sealing
7 Front panel
8 Fixing nut
9 Switching-/Illumination element with plug-in terminal (solderable)

Indicator and pushbutton illuminative, 40 mm dia.



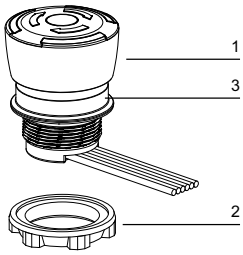
1 Lens
2 Marking plate
3 Lens holder
4 Actuator housing
5 Sealing
6 Front panel
7 Fixing nut
8 Switching-/Illumination element with flat ribbon cable

Indicator and pushbutton illuminative, 25 mm dia., PCB version



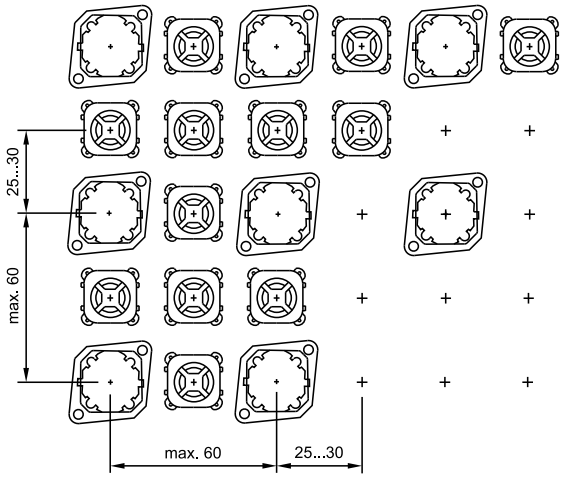
1 Lens
2 Marking plate
3 Lens holder
4 Actuator housing
5 Sealing
6 Front panel
7 Fixing nut
8 Mounting flange
9 Switching-/Illumination element with PCB terminal
10 PCB
11 Fixing screws

Emergency-stop pushbutton



1 Emergency-stop pushbutton
2 Fixing nut
3 Position indication ring green or black

Arrangement mounting flange for Switching- and Illumination element, PCB version



The arrangement of the mounting flanges and their number is determined by the size of the front panel or PCB. To ensure uniform, tactile switching, we recommend a layout of the flanges as per adjacent sketch.

For large PCBs with several switching elements we recommend the following procedure :

1. Fit the actuator to the front panel.
2. Clip the mounting flange to the rear of the intended actuator.
3. Screw the PCB with the components soldered to it to the assembled mounting flange.

This arrangement applies to PCBs 1.6 mm thick.

Dismantling mounting flange

The tool 84-998 must be used for removing the mounting flange from the actuator. Before removing the flange, the PCB fixing srews must be loosened.

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

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

	Front protection	Switching action	Mushroom had cap	Illumination	Terminals	Contacts	Ø 32 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete Position indication ring black Twist to unlock clockwise	IP 65	MA	Plastic red	without	FR	1 NC	**84-5020.0040**	2	2	15	8	0.036
						1 NC + 1 NO	**84-5030.0040**	2	2	15	9	0.036
						2 NC	**84-5040.0040**	2	2	15	10	0.036
					PT 2.8 s	1 NC	**84-5020.0020**	1	2	15	8	0.028
						1 NC + 1 NO	**84-5030.0020**	1	2	15	9	0.028
						2 NC	**84-5040.0020**	1	2	15	10	0.028
Position indication ring black Twist to unlock clockwise LED operating voltage: 5 ... 30 VDC Current consumption: 9.7 ...12.4 mA	IP 65	MA	Plastic red	LED red	FR	1 NC	**84-5021.2B40**	2	2	15	11	0.036
						1 NC + 1 NO	**84-5031.2B40**	2	2	15	12	0.036
						2 NC	**84-5041.2B40**	2	2	15	13	0.036
					PT 2.8 s	1 NC	**84-5021.2B20**	1	2	15	11	0.028
						1 NC + 1 NO	**84-5031.2B20**	1	2	15	12	0.028
						2 NC	**84-5041.2B20**	1	2	15	13	0.028
Position indication ring green Twist to unlock clockwise	IP 65	MA	Plastic red	without	FR	1 NC	**84-5120.0040**	2	2	15	8	0.036
						1 NC + 1 NO	**84-5130.0040**	2	2	15	9	0.036
						2 NC	**84-5140.0040**	2	2	15	10	0.036
					PT 2.8 s	1 NC	**84-5120.0020**	1	2	15	8	0.028
						1 NC + 1 NO	**84-5130.0020**	1	2	15	9	0.028
						2 NC	**84-5140.0020**	1	2	15	10	0.028
Position indication ring green Twist to unlock clockwise LED operating voltage: 5 ... 30 VDC Current consumption: 9.7 ... 12.4 mA	IP 65	MA	Plastic red	LED red	FR	1 NC	**84-5121.2B40**	2	2	15	11	0.036
						1 NC + 1 NO	**84-5131.2B40**	2	2	15	12	0.036
						2 NC	**84-5141.2B40**	2	2	15	13	0.036
					PT 2.8 s	1 NC	**84-5121.2B20**	1	2	15	10	0.028
						1 NC + 1 NO	**84-5131.2B20**	1	2	15	12	0.028
						2 NC	**84-5141.2B20**	1	2	15	13	0.028

Standard version:
Flat ribbon-cable length 300 mm; Plug-in terminal 2.8 x 0.5 mm.
Other options on request:
Customisation of flat ribbon-cable and connectors.
Switching action: MA = Maintained action
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Contacts: NC = Normally closed, NO = Normally open
Component layout from page 28, Mounting dimensions from page 29, Technical drawing from page 30, Circuit drawing from page 37

Stop pushbutton grey, complete

	Front protection	Switching action	Mushroom had cap	Illumination	Terminals	Contacts	Ø 32 mm Typ-Nr.	Component layout	Mounting dimensions	Technical drawing	Circuit drawing	kg
Stop pushbutton grey, complete Position indication ring black Twist to unlock clockwise	IP 65	MA	Plastic grey	without	FR	1 NC	**84-6020.0040**	2	2	15	8	0.036
						1 NC + 1 NO	**84-6030.0040**	2	2	15	9	0.036
						2 NC	**84-6040.0040**	2	2	15	10	0.036
					PT 2.8 s	1 NC	**84-6020.0020**	1	2	15	8	0.028
						1 NC + 1 NO	**84-6030.0020**	1	2	15	9	0.028
						2 NC	**84-6040.0020**	1	2	15	10	0.028
Position indication ring black Twist to unlock clockwise LED operating voltage: 5 ... 30 VDC Current consumption: 9.7 ...12.4 mA	IP 65	MA	Plastic grey	LED red	FR	1 NC	**84-6021.2B40**	2	2	15	11	0.036
						1 NC + 1 NO	**84-6031.2B40**	2	2	15	12	0.036
						2 NC	**84-6041.2B40**	2	2	15	13	0.036
					PT 2.8 s	1 NC	**84-6021.2B20**	1	2	15	11	0.028
						1 NC + 1 NO	**84-6031.2B20**	1	2	15	12	0.028
						2 NC	**84-6041.2B20**	1	2	15	13	0.028

Standard version:
Flat ribbon-cable length 300 mm; Plug-in terminal 2.8 x 0.5 mm.
Other options on request:
Customisation of flat ribbon-cable and connectors.
Switching action: MA = Maintained action
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Contacts: NC = Normally closed, NO = Normally open
Component layout from page 28, Mounting dimensions from page 29, Technical drawing from page 30, Circuit drawing from page 37

Indicator actuator, flush mounting



Essential Accessories:

- Illumination element page 15
- Lens metal, Halo illumination page 12
- Lens plastic page 11

	Front protection	Front ring	Ø 25 mm Typ-Nr.	Mounting dimensions	Technical drawing	kg
Indicator actuator, flush mounting	IP 40	Plastic black	**84-3100.0**	1	14	0.004
	IP 67	Aluminium natural	**84-0200.7**	1	14	0.008
		Plastic black	**84-0100.0**	1	14	0.003
Halo illumination	IP 67	Plastic translucent	**84-0090.7**	1	14	0.006

Accessories for Halo illumination:
Essential lenses Typ-Nr. 84-7202.x00A and 84-7205.x00A.
Recommended illumination elements Typ-Nr. 84-8001.xxx0 (only Single-LED blue, green and white).
Mounting dimensions from page 29, Technical drawing from page 30

Illuminated pushbutton actuator, flush mounting




Essential Accessories:

- Lens metal, Halo illumination page 12
- Lens plastic page 11
- Switching element illuminated page 17

	Switching action	Front protection	Front ring	Ø 40 mm Typ-Nr.	Ø 25 mm Typ-Nr.	Mounting dimensions	Technical drawing	Circuit drawing	kg
Illuminated pushbutton actuator, flush mounting illuminative	M	IP 67	Aluminium natural	**84-1221.7**		3	21	4	0.022
Halo illumination	M	IP 67	Plastic translucent		**84-1091.7**	1	14	4	0.006
illuminative	M	IP 40	Plastic black		**84-2101.0**	1	14	4	0.004
		IP 67	Aluminium black		**84-1201.0**	1	14	4	0.008
					84-1201.2	1	14	4	0.008
			Aluminium blue		**84-1201.6**	1	14	4	0.008
			Aluminium green		**84-1201.5**	1	14	4	0.008
			Aluminium natural		**84-1201.7**	1	14	4	0.008
			Aluminium yellow		**84-1201.4**	1	14	4	0.008
			Plastic black		**84-1101.0**	1	14	4	0.003

Accessories for Halo illumination:
Essential lenses Typ-Nr. 84-7202.x00A and 84-7205.x00A.
Recommended switching elements Typ-Nr. 84-8511.xxx0 (only Single-LED blue, green and white).
Switching action: M = Momentary action
Mounting dimensions from page 29, Technical drawing from page 30, Circuit drawing from page 37

Front

Lens plastic

	Lens	Ø 25 mm Typ-Nr.	kg
Lens plastic flush, illuminative	blue transparent	**84-7111.600**	0.001
	colourless transparent	**84-7111.700**	0.001
	green transparent	**84-7111.500**	0.001
	orange transparent	**84-7111.300**	0.001
	red transparent	**84-7111.200**	0.001
	yellow transparent	**84-7111.400**	0.001
flush, non-illuminative	black opaque	**84-7121.000**	0.001
	grey opaque	**84-7121.800**	0.001
raised, illuminative	blue transparent	**84-7115.600**	0.001
	colourless transparent	**84-7115.700**	0.001
	green transparent	**84-7115.500**	0.001
	orange transparent	**84-7115.300**	0.001
	red transparent	**84-7115.200**	0.001
	yellow transparent	**84-7115.400**	0.001
raised, non-illuminative	black opaque	**84-7125.000**	0.001
	grey opaque	**84-7125.800**	0.001

Marking plate for Lens plastic

can be hot stamped

	Marking plate	Typ-Nr.	kg
Marking plate for Lens plastic	Plastic colourless transparent	**61-9707.7**	0.001

Lens plastic, Halo illumination

	Lens	Ø 25 mm Typ-Nr.	kg
Lens plastic, Halo illumination flush	blue transparent	**84-7111.601**	0.002
	colourless transparent	**84-7111.701**	0.002
	green transparent	**84-7111.501**	0.002
	orange transparent	**84-7111.301**	0.002
	red transparent	**84-7111.201**	0.002
	yellow transparent	**84-7111.401**	0.002

The silvery coat is being applied on the lens (screen print) with an additional protective lacquer.

Lens metal

	Lens	Ø 25 mm Typ-Nr.	kg
Lens metal convex	Aluminium black	**84-7202.000**	0.003
	Aluminium blue	**84-7202.600**	0.003
	Aluminium green	**84-7202.500**	0.003
	Aluminium natural	**84-7202.800**	0.003
	Aluminium red	**84-7202.200**	0.003
	Aluminium yellow	**84-7202.400**	0.003
flush	Aluminium black	**84-7201.000**	0.003
	Aluminium blue	**84-7201.600**	0.003
	Aluminium green	**84-7201.500**	0.003
	Aluminium natural	**84-7201.800**	0.003
	Aluminium red	**84-7201.200**	0.003
	Aluminium yellow	**84-7201.400**	0.003
raised	Aluminium black	**84-7205.000**	0.003
	Aluminium blue	**84-7205.600**	0.003
	Aluminium green	**84-7205.500**	0.003
	Aluminium natural	**84-7205.800**	0.003
	Aluminium red	**84-7205.200**	0.003
	Aluminium yellow	**84-7205.400**	0.003

Lens metal, Halo illumination

	Lens	Ø 25 mm Typ-Nr.	kg
Lens metal, Halo illumination convex	Aluminium black	**84-7202.000A**	0.004
	Aluminium blue	**84-7202.600A**	0.004
	Aluminium green	**84-7202.500B**	0.004
	Aluminium natural	**84-7202.800A**	0.004
	Aluminium red	**84-7202.200A**	0.004
	Aluminium yellow	**84-7202.400A**	0.004
raised	Aluminium black	**84-7205.000A**	0.003
	Aluminium blue	**84-7205.600A**	0.003
	Aluminium green	**84-7205.500A**	0.003
	Aluminium natural	**84-7205.800A**	0.003
	Aluminium red	**84-7205.200A**	0.003
	Aluminium yellow	**84-7205.400A**	0.003

Lens metal with window

	Lens	Ø 25 mm Typ-Nr.	kg
Lens metal with window flush	Aluminium black	**84-7211.000**	0.002
	Aluminium blue	**84-7211.600**	0.002
	Aluminium green	**84-7211.500**	0.002
	Aluminium natural	**84-7211.800**	0.002
	Aluminium red	**84-7211.200**	0.002
	Aluminium yellow	**84-7211.400**	0.002
raised	Aluminium black	**84-7215.000**	0.002
	Aluminium blue	**84-7215.600**	0.002
	Aluminium green	**84-7215.500**	0.002
	Aluminium natural	**84-7215.800**	0.002
	Aluminium red	**84-7215.200**	0.002
	Aluminium yellow	**84-7215.400**	0.002

Mushroom-head cap

	Mushroom had cap	Ø 32 mm Typ-Nr.	kg
Mushroom-head cap	Plastic black opaque	**84-7124.000A**	0.004
	Plastic blue opaque	**84-7124.600A**	0.004
	Plastic green opaque	**84-7124.500A**	0.004
	Plastic red opaque	**84-7124.200A**	0.004
	Plastic yellow opaque	**84-7124.400A**	0.004

Front protective cap

for flush lenses only

	Front protective cap	Typ-Nr.	kg
Front protective cap	Silicone natural transparent	**84-9103.7**	0.001

ATTENTION
when using the front protection cover the external sealing in the actuator has to be removed !

Legend frame

for devices 25 mm dia.

	Typ-Nr.	Technical drawing	kg
Legend frame 30 x 50 mm, adhesive, Aluminium black	**61-9980.0**	7	0.001

Technical drawing from page 30

Legend plate insert

for Legend frame 61-9980.0

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

Blind plug

	Blind plug	Typ-Nr.	Technical drawing	
Blind plug Size 25 mm dia., for mounting hole 22.5 mm dia.	Plastic black	**61-9453.0**	8	0.006
Size 36 mm dia., for mounting hole 30.5 mm dia.	Plastic black	**704.964.8**	1	0.007

Technical drawing from page 30

Backside

Illumination element

	Illumination	Operating voltage/-current	Terminals	Typ-Nr.	Circuit drawing	kg
Illumination element LED and built-in resistor included	Multi-LED green	12 VDC, 40 mA	FR	**84-8002.5340**	5	0.010
			PT 2.8 s	**84-8002.5320**	5	0.005
		24 VDC, 20 mA	FR	**84-8002.5640**	5	0.010
			PT 2.8 s	**84-8002.5620**	5	0.005
	Multi-LED orange	12 VDC, 40 mA	FR	**84-8002.3340**	5	0.010
			PT 2.8 s	**84-8002.3320**	5	0.005
		24 VDC, 20 mA	FR	**84-8002.3640**	5	0.010
			PT 2.8 s	**84-8002.3620**	5	0.005
	Multi-LED red	12 VDC, 40 mA	FR	**84-8002.2340**	5	0.010
			PT 2.8 s	**84-8002.2320**	5	0.005
		24 VDC, 20 mA	FR	**84-8002.2640**	5	0.010
			PT 2.8 s	**84-8002.2620**	5	0.005
	Multi-LED yellow	12 VDC, 40 mA	FR	**84-8002.4340**	5	0.010
			PT 2.8 s	**84-8002.4320**	5	0.005
		24 VDC, 20 mA	FR	**84-8002.4640**	5	0.010
			PT 2.8 s	**84-8002.4620**	5	0.005
	Single-LED blue	24 VDC, 20 mA	FR	**84-8001.6640**	5	0.010
			PT 2.8 s	**84-8001.6620**	5	0.005
	Single-LED green	24 VDC, 20 mA	FR	**84-8001.5640**	5	0.010
			PT 2.8 s	**84-8001.5620**	5	0.005
	Single-LED orange	24 VDC, 20 mA	FR	**84-8001.3640**	5	0.010
			PT 2.8 s	**84-8001.3620**	5	0.005
	Single-LED red	24 VDC, 20 mA	FR	**84-8001.2640**	5	0.010
			PT 2.8 s	**84-8001.2620**	5	0.005
	Single-LED white	12 VDC, 40 mA	FR	**84-8001.9340**	5	0.010
			PT 2.8 s	**84-8001.9320**	5	0.005
		24 VDC, 20 mA	FR	**84-8001.9640**	5	0.010
			PT 2.8 s	**84-8001.9620**	5	0.005
	Single-LED yellow	24 VDC, 20 mA	FR	**84-8001.4640**	5	0.010
			PT 2.8 s	**84-8001.4620**	5	0.005

Standard version:
Cable length 300 mm with insulated ferrule; Plug-in terminal 2.8 x 0.8 mm.
Other options on request:
Customisation of cable and connectors.
Protection degree (rear side):
Plug-in terminal IP 40, upgrade to IP 67 with Plug Typ-Nr. 84-900 possible.
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Circuit drawing from page 37

Illumination element with Bi-Color illumination

	Operating voltage/-current	Illumination	Terminals	Typ-Nr.	Circuit drawing	kg
Illumination element with Bi-Color illumination LED and built-in resistor included	24 VDC, 20 mA	Bi-Color LED red/green	FR	**84-8005.8640**	2	0.011
			PT 2.8 s	**84-8005.8620**	1	0.005
		Bi-Color LED yellow/green	FR	**84-8005.7640**	2	0.011
			PT 2.8 s	**84-8005.7620**	1	0.005

Standard version:
Cable length 300 mm with insulated ferrule; Plug-in terminal 2.8 x 0.8 mm.
Other options on request:
Customisation of cable and connectors.
The illumination element in the cable version cannot be dismounted from the actuator anymore!
Best illumination level will be reached with Alu lens with window, Typ-Nr. 84-7215.x00 and 84-7211.x00.
Protection degree (rear side) :
- Plug-in terminal IP 40, upgrade to IP 67 with Plug Typ-Nr. 84-900 possible.
- Cabel connection IP 67, rear side fully sealed.
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Circuit drawing from page 37

Switching element illuminated

	Contacts	Illumination	Operating voltage/-current	Terminals	Typ-Nr.	Circuit drawing	kg
Switching element illuminated LED and built-in resistor included	1 NO	Multi-LED blue	24 VDC, 20 mA	FR	**84-8512.6640**	7	0.015
				PT 2.8 s	**84-8512.6620**	7	0.006
		Multi-LED green	12 VDC, 40 mA	FR	**84-8512.5340**	7	0.015
				PT 2.8 s	**84-8512.5320**	7	0.006
			24 VDC, 20 mA	FR	**84-8512.5640**	7	0.015
				PT 2.8 s	**84-8512.5620**	7	0.006
		Multi-LED orange	12 VDC, 40 mA	FR	**84-8512.3340**	7	0.015
				PT 2.8 s	**84-8512.3320**	7	0.006
			24 VDC, 20 mA	FR	**84-8512.3640**	7	0.015
				PT 2.8 s	**84-8512.3620**	7	0.006
		Multi-LED red	12 VDC, 40 mA	FR	**84-8512.2340**	7	0.015
				PT 2.8 s	**84-8512.2320**	7	0.006
			24 VDC, 20 mA	FR	**84-8512.2640**	7	0.015
				PT 2.8 s	**84-8512.2620**	7	0.006
		Multi-LED yellow	12 VDC, 40 mA	FR	**84-8512.4340**	7	0.015
				PT 2.8 s	**84-8512.4320**	7	0.006
			24 VDC, 20 mA	FR	**84-8512.4640**	7	0.015
				PT 2.8 s	**84-8512.4620**	7	0.006
		Single-LED blue	24 VDC, 20 mA	FR	**84-8511.6640**	7	0.015
				PT 2.8 s	**84-8511.6620**	7	0.006
		Single-LED green	24 VDC, 20 mA	FR	**84-8511.5640**	7	0.015
				PT 2.8 s	**84-8511.5620**	7	0.006
		Single-LED orange	24 VDC, 20 mA	FR	**84-8511.3640**	7	0.015
				PT 2.8 s	**84-8511.3620**	7	0.006
		Single-LED red	24 VDC, 20 mA	FR	**84-8511.2640**	7	0.015
				PT 2.8 s	**84-8511.2620**	7	0.006
		Single-LED white	12 VDC, 40 mA	FR	**84-8511.9340**	7	0.015
				PT 2.8 s	**84-8511.9320**	7	0.006
			24 VDC, 20 mA	FR	**84-8511.9640**	7	0.015
				PT 2.8 s	**84-8511.9620**	7	0.006
		Single-LED yellow	24 VDC, 20 mA	FR	**84-8511.4640**	7	0.015
				PT 2.8 s	**84-8511.4620**	7	0.006

Standard version:
Cable length 300 mm with insulated ferrule; Plug-in terminal 2.8 x 0.8 mm.
Other options on request:
Customisation of cable and connectors.
Protection degree (rear side):
Plug-in terminal IP 40, upgrade to IP 67 with Plug Typ-Nr. 84-900 possible.
Contacts: NO = Normally open
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Circuit drawing from page 37

Switching element with Bi-Color illumination

	Contacts	Illumination	Operating voltage/-current	Terminals	Typ-Nr.	Circuit drawing	kg
Switching element with Bi-Color illumination LED and built-in resistor included	1 NO	Bi-Color LED red/green	24 VDC, 20 mA	FR	**84-8515.8640**	3	0.015
		Bi-Color LED yellow/green	24 VDC, 20 mA	FR	**84-8515.7640**	3	0.015

Protection degree IP 67, back side fully sealed.
Non-removable switching element from actuator anymore.
Best illumination level will be reached with Alu lens with window, Typ-Nr. 84-7215.x00 and 84-7211.x00.
Standard version:
Cable length 300 mm with insulated ferrule.
Other options on request:
Customisation of cable and connectors.
Contacts: NO = Normally open
Terminals: FR = Flat ribbon cable
Circuit drawing from page 37

Switching element non-illuminated

	Contacts	Terminals	Typ-Nr.	Circuit drawing	kg
Switching element non-illuminated	1 NO	FR	**84-8510.0040**	6	0.010
		PT 2.8 s	**84-8510.0020**	6	0.005

Standard version:
Cable length 300 mm with insulated ferrule; Plug-in terminal 2.8 x 0.8 mm (solderable).
Other options on request:
Customisation of cable and connectors.
Protection degree (rear side):
Plug-in terminal IP 40, upgrade to IP 67 with Plug Typ-Nr. 84-900 possible.
Contacts: NO = Normally open
Terminals: FR = Flat ribbon cable, PT 2.8 s = Plug-in terminal 2.8 mm (solderable)
Circuit drawing from page 37

Switching element illuminative with PCB terminal

The customer has to decide what series resistor shall be used to the LED

	Contacts	Terminals	Typ-Nr.	Component layout	Technical drawing	Circuit drawing	kg
Switching element illuminative with PCB terminal	1 NO	P	**92-851.342**	4	13	14	0.001

Illumination and mounting flange to be ordered separately.
Contacts: NO = Normally open
Terminals: P = PCB terminal
Component layout from page 28, Technical drawing from page 30, Circuit drawing from page 37

Illumination element with PCB terminal

The customer has to decide what series resistor shall be used to the LED

	Terminals	Typ-Nr.	Component layout	Technical drawing	kg
Illumination element with PCB terminal	P	**92-800.042**	3	9	0.001

Illumination and mounting flange to be ordered separately.
Terminals: P = PCB terminal
Component layout from page 28, Technical drawing from page 30

Mounting flange

	Typ-Nr.	Technical drawing	kg
Mounting flange for Switching- and Illumination element with PCB terminal	**92-960.0**	10	0.001

Technical drawing from page 30

Flat receptacle

	Typ-Nr.	kg
Flat receptacle 2.8 x 0.8 mm	**84-9420**	0.001

Insulation sleeve

	Typ-Nr.	kg
Insulation sleeve for Flat receptacles 84-9420	**31-929**	0.001

Plug

	Typ-Nr.	kg
Plug	**84-900**	0.001

for back protection IP 67 of Switching elements and Illumination elements.
2 plugs are nessecary per element.

Illumination

Single-LED

The customer has to decide what series resistor shall be used to the LED

	Socket	Light colour	Operating voltage/-current	Typ-Nr.	kg
Single-LED	T1 Bi-Pin	blue	3.6 VDC, 20 mA	**10-2603.3176D**	0.001
		green	2.2 VDC, 20 mA	**10-2602.3175D**	0.001
		orange	2.2 VDC, 20 mA	**10-2602.3173D**	0.001
		red	2.2 VDC, 20 mA	**10-2602.3172D**	0.001
		white	3.6 VDC, 20 mA	**10-2603.3179D**	0.001
		yellow	2.2 VDC, 20 mA	**10-2602.3174D**	0.001

Multi-LED

The customer has to decide what series resistor shall be used to the LED

	Socket	Light colour	Operating voltage/-current	Typ-Nr.	kg
Multi-LED	T1 Bi-Pin	orange	12 VDC, 40 mA	**10-5609.3173D**	0.001
			6 VDC, 40 mA	**10-5606.3243D**	0.001
		red	12 VDC, 40 mA	**10-5609.3172D**	0.001
			6 VDC, 40 mA	**10-5606.3242D**	0.001
		yellow	12 VDC, 40 mA	**10-5609.3174D**	0.001
			6 VDC, 40 mA	**10-5606.3244D**	0.001

Emergency-stop and Stop pushbutton

Emergency-stop label

front panel thickness 3 mm max.

	Marking	Typ-Nr.	kg
Emergency-stop label 60 mm dia., yellow, Mounting hole size 22.5 mm dia.	ARRET D'URGENCE	**704.963.7**	0.011
	EMERGENCY STOP	**704.963.6**	0.011
	NOT AUS	**704.963.5**	0.011
	NOT HALT	**704.963.8**	0.011
90 mm dia., yellow, Mounting hole size 22.5 mm dia.	ARRET D'URGENCE	**704.963.2**	0.011
	EMERGENCY STOP	**704.963.1**	0.011
	NOT AUS	**704.963.0**	0.011
	NOT HALT	**704.963.3**	0.011

Emergency-stop protective shroud

Front panel thickness 1 ... 3 mm

	Marking	Typ-Nr.	Technical drawing	kg
Emergency-stop protective shroud 45 mm dia., IP 40, mounting hole 22.5 mm dia., with anti-twist device	without	**84-909**	12	0.021
50 mm dia., IP 65, mounting hole 22.5 mm dia., with anti-twist device	EMERGENCY STOP	**84-902B**		0.006
	NOT - AUS	**84-902A**		0.006
	NOT - HALT	**84-902D**		0.006
	without	**84-902**		0.006

Please note: By using the protective shroud Typ-Nr. 84-909 the E-stop or Stop-Switch has to be mounted twisted by 180 °. Consult the dimensional drawing therfore.
Technical drawing from page 30

Fixing nut

	Fixing nut	Typ-Nr.	kg
Fixing nut 28 mm dia.	Plastic black	**84-905**	0.002
30 mm dia., standard delivery	Plastic black	**84-908**	0.002

Emergency-stop enclosures

Bottom grey similar RAL 7035; cover lead-sealable, yellow similar RAL 1004

	Dimension	Typ-Nr.	Technical drawing	kg
Emergency-stop enclosures with mounting hole 22.5 mm dia., with anti- twist device	L 65 mm, W 65 mm, H 57 mm	**84-910**	11	0.099

Openings for cable gland M16 or M20.
Protection class IP 66.
Technical drawing from page 30

Stop pushbutton enclosure

Grey similar RAL 7035; cover lead-sealable

	Dimension	Typ-Nr.	Technical drawing	kg
Stop pushbutton enclosure with mounting hole 1 x 22.5 mm dia., with anti-twist device	L 94 mm, W 94 mm, H 81 mm	**704.945.1**	2	0.211
with mounting hole 2 x 22.5 mm dia., with anti-twist device	L 130 mm, W 94 mm, H 81 mm	**704.945.2**	3	0.251
with mounting hole 3 x 22.5 mm dia., with anti-twist device	L 180 mm, W 94 mm, H 81 mm	**704.945.3**	4	0.313
with mounting hole 4 x 22.5 mm dia., with anti-twist device	L 180 mm, W 182 mm, H 110 mm	**704.945.4**	5	0.572
with mounting hole 6 x 22.5 mm dia., with anti-twist device	L 180 mm, W 182 mm, H 110 mm	**704.945.5**	6	0.568

Technical drawing from page 30

Cable gland

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

with traction relief; protection degree IP 68.

Flat receptacle

	Typ-Nr.	kg
Flat receptacle 2.8 x 0.5 mm for Plug-in terminal	**31-946**	0.001

Insulation sleeve

	Typ-Nr.	kg
Insulation sleeve for Flat receptacles 31-946	**31-929**	0.001

Stop request pushbutton

Housing, pole mounting 35 mm dia.

	Housing	Colour	Typ-Nr.	Technical drawing	kg
Housing, pole mounting 35 mm dia.	Plastic blue	RAL 5017 traffic blue	**84-9500.6A**	16	0.035
	Plastic grey	RAL 7016	**84-9500.8**	16	0.035
	Plastic yellow	RAL 1023	**84-9500.4**	16	0.035

Screws are not contained in the scope of supply.
Technical drawing from page 30

Housing, pole mounting 38 mm dia.

	Housing	Colour	Typ-Nr.	Technical drawing	kg
Housing, pole mounting 38 mm dia.	Plastic grey	RAL 7016	**84-9600.8**	17	0.030
	Plastic yellow	RAL 1023	**84-9600.4**	17	0.030

Screws are not contained in the scope of supply.
Technical drawing from page 30

Adaptor, reducing to 30 mm dia.

	Housing	Colour	Typ-Nr.	Technical drawing	kg
Adaptor, reducing to 30 mm dia. for housing, pole mounting 35 mm dia.	Plastic grey	RAL 7016	**84-9700.8**	20	0.024
	Plastic yellow	RAL 1023	**84-9700.4**	20	0.024

Technical drawing from page 30

Adaptor, reducing to 25 mm dia.

	Housing	Colour	Typ-Nr.	Technical drawing	kg
Adaptor, reducing to 25 mm dia. for housing, pole mounting 35 mm dia.	Plastic grey	RAL 7016	**84-9300.8**	19	0.008
	Plastic yellow	RAL 1023	**84-9300.4**	19	0.008

Technical drawing from page 30

Housing, wall mounting

	Housing	Colour	Typ-Nr.	Technical drawing	kg
Housing, wall mounting	Plastic grey	RAL 7016	**84-9800.8**	18	0.024
	Plastic yellow	RAL 1023	**84-9800.4**	18	0.024

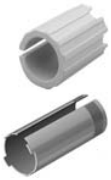
Screws are not contained in the scope of supply.
Technical drawing from page 30

Assembling

Lens remover

	Typ-Nr.	kg
Lens remover	**61-9730.0**	0.011

Mounting tool



	Typ-Nr.	kg
Mounting tool for tightening or loosening of Emergency-stop and Stop-Switch fixing nut	**84-996**	0.014
for tightening or loosening of Fixing nut, Indicator and Pushbutton	**84-997**	0.027

Dismantling tool

	Typ-Nr.	kg
Dismantling tool for actuator dismantling of switching- and illumination element and mounting flange	**84-998**	0.002

Emergency-stop

Switching system

The double-break switching system can be supplied for the following switching functions:
1 Normally closed, 2 Normally closed, 1 Normally closed + 1 Normally open.
The Normally closed contacts have forced opening according to EN IEC 60947-5-1

Material

Connection cable
Polyvinylchloride (PVC), operating temperature up to +65 °C

Mushroom-head cap
Polybutylenterephthalate (PBT), as per UL 94 V0 (red items)

Actuator housing
Polyamide (PA 66), as per UL 94 V0, Flat ribbon cable-cover Polyamide (PA 6.6), as per UL 94 V0

Material of contact
Silver alloy gold plated

Mechanical characteristics

Front panel thickness
Standard 1 ... 4 mm
with E-stop protective shroud Typ-Nr. 84-902 1 ... 3 mm

Mounting hole
22.5 mm dia. as per EN IEC 60947-5-1 with anti-twist device

Terminals
Soldering terminals 2.8 x 0.5 mm (solderable), CuSn6 tin-plated
Flat ribbon cable 2-, 4-, or 6-poles 0.35 mm² (AWG 22)

Tightening torque
Fixing nut 80 Ncm

Actuating force
22 N ±4 N

Actuating travel
approx. 4 mm to release the internal operation part

Mechanical lifetime
≥50.000 cycles of operations

Electrical characteristics

Standards
The devices comply with : EN IEC 60947-5-1, EN IEC 60947-5-5 (Emergency-stop), DIN EN ISO 13850, EN IEC 60204

Illumination
LED red with pole reversal, constant current source

Operation Voltage	5 VDC ... 30 VDC
Current consumption	9.7 mA ... 12.4 mA

Rated Operational Voltage U_e
250 VAC, as per EN IEC 60947-1

Rated Insulation Voltage U_i
250 V, as per EN IEC 60947-1

Rated Impulse Withstand Voltage U_{imp}
2.5 kV, as per EN IEC 60947-1

Contact resistance
New state ≤ 50 mΩ, as per DIN IEC 60512-2-3

Isolation resistance
$>10^{11}$ Ω between the opend contats at 500 VDC, as per DIN IEC 60512-2-10

Electrical life
≥50 000 cycles of operations (inductive cosϕ 0.4), as per EN IEC 60947-5-1

Voltage	120 VAC	240 VAC	125 VDC	250 VDC
Current	3 A	1.5 A	0.55 A	0.27 A

Reduced load ≥50'000 cycles of operations (resistive)

Voltage	1 VAC/DC	42 VAC/DC
Current	100 mA	200 mA

Conventional free air thermal current I_{th}
5 A, as per EN IEC 60947-5-1
the maximum current in continuous operation and at ambient temperature must not exceed the quoted maximum values.

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

Voltage	120 VAC	240 VAC
Current	3 A	1.5 A

Switch rating DC for silver contact (gold plated), service category DC-13, as per EN IEC 60947-5-1 (inductive)

Voltage	12 VDC	24 VDC	48 VDC	60 VDC	125 VDC	250 VDC
Current $_{Plug}$	5 A	4 A	2.1 A	1.7 A	0.55 A	0.27 A
Current $_{Cable}$	3 A	3 A	2.1 A	1.7 A	0.55 A	0.27 A

Recommended minimum operational data
Silver contacts (gold plated)

Voltage	1 VAC/DC
Current	1 mA

Electric strength
500 VAC, 50 Hz, 1 min, as per DIN IEC 60512-2

Rated conditional short-circuit current
1000 A, type of short-circuit unit 6 A gG, as per EN IEC 60947-5-1

Protection class
Class II, as per EN IEC 60947-5

Overvoltage category
II, as per EN IEC 60947-1

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

Environmental conditions

Storage temperature
-25 °C ... +80 °C

Operating temperature
-25 °C ... +65 °C

Front protection
IP 65, as per EN IEC 60529

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

Vibration resistance
(sinusoidal)
max. 50 m/s² at 10 Hz ... 500 Hz, 10 cycles, 3-axis, as per EN IEC 60068-2-6

Climate resistance
Damp heat, cyclic
96 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity, as per EN IEC 60068-2-30

Damp heat, steady
56 days, +40 °C / 93 % relative humidity, as per EN IEC 60068-2-78

Dry heat
96 hours, +70 °C, as per EN IEC 60068-2-2

Low temperature
96 hours, -40 °C, as per EN IEC 60068-2-1

Saline mist
96 Stunden, +35 °C in chemical solution NaCl, as per EN IEC 60068-2-11

Approvals

Approbations
SEV
UL

Declaration of conformity
CE
RoHS

Switching element illuminated pushbutton

Switching system

Short-travel switching system with 2 independent contact points and tactile operation.
Guarantees reliable switching even of very light loads.
Fitted with 1 normally open contact.

Material

Connection cable
Polyvinylchloride (PVC), short-time heat-resistant up to 105 °C

Material of contact
Silver alloy gold plated

Switching element
Thermoplastic polyester (PET, PBT), as per UL 94 V0 and Polyacetale (POM), as per UL 94 HB

Mechanical characteristics

Terminals
Plug-in terminals 2.8 x 0.8 mm (solderable)
Flat ribbon cable 0.5 mm²
PCB terminal

Actuating force
4.0 N ±0.2 N (measured at the lens)

Actuating travel
~0.5 mm

Rebound time
≤1 ms

Resistance to heat of soldering
260 °C, 5 s (PCB assembly)
350 °C, 10 s (when using a soldering iron)
as per EN IEC 60068-2-20

Mechanical lifetime
≥1 million cycles of operations

Electrical characteristics

Illumination
Single-Chip or Multi-Chip LED, green, orange, red, yellow, white and blue

Operation Voltage	12 VDC	24 VDC
Current consumption	40 mA	20 mA

Contact resistance
Starting value (initial) ≤100 mΩ, as per DIN IEC 60512-2

Isolation resistance
≥1 G Ω between all terminals at 100 VDC, as per DIN IEC 60512-2

Electrical life
as per EN IEC 60512-5

5 million	cycles of operation	24 VAC, 50 mA at 480 Ω
5 million	cycles of operation	24 VAC, 100 mA at 240 Ω
2 million	cycles of operation	42 VAC, 50 mA at 840 Ω
2 million	cycles of operation	42 VAC, 100 mA at 420 Ω
300 000	cycles of operation	42 VAC, 100 mA at cosϕ 0,4
250 000	cycles of operation	42 VAC, 200 mA at cosϕ 0,395
1 million	cycles of operation	12 VDC, 250 mA at 48 Ω
1 million	cycles of operation	24 VDC, 50 mA at 480 Ω
1 million	cycles of operation	24 VDC, 100 mA at 240 Ω
5 million	cycles of operation	42 VDC, 25 mA at 1680 Ω
1.5 million	cycles of operation	42 VDC, 50 mA at 840 Ω
100 000	cycles of operation	42 VDC, 100 mA at 420 Ω
500 000	cycles of operation	24 VDC, 200 mA at L/R=30 ms
300 000	cycles of operation	42 VDC, 100 mA at L/R=30 ms
100 000	cycles of operation	42 VDC, 200 mA at L/R=30 ms

Switch rating

Voltage	50 mVAC/DC ... 42 VAC/DC
Current	10 uA ... 100 mA
Power	max. 2 W

Electric strength
500 VAC, 50 Hz, 1 min, as per DIN IEC 60512-2

Environmental conditions

Storage temperature
-40 °C ... +85 °C

Operating temperature
-25 °C ... +70 °C

Protection degree
For IP 67 back protection, cable version only, use Plug Typ-Nr. 84-900

Shock resistance
(semi-sinusoidal)
max. 100 m/s², pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27

Vibration resistance
(sinusoidal)
max. 50 m/s² at 10 Hz ... 500 Hz, 10 cycles, 3-axis, as per EN IEC 60068-2-6

Actuator

Material

Lens
Polycarbonate (PC), as per UL 94 V2 or Aluminium anodised

Actuator housing
Polyetherimid (PEI), as per UL 94 V0 or Aluminium anodised

Mechanical characteristics

Mounting hole
22.5 mm dia. and 30.5 mm dia.

Tightening torque
Fixing nut max. 80 Ncm

Actuating force
4.0 N ±0.2 N (measured at the lens)

Actuating travel
Total switching travel 1.2 mm

Mechanical lifetime
≥1 million cycles of operations

Electrical characteristics

Electrostatic breakdown value

Plastic case ≥15 kV
Aluminium case ≥5 kV
as per IEC 61000-4-2, mounted in plastic front panel

Environmental conditions

Storage temperature
-40 °C ... +85 °C

Operating temperature
-25 °C ... +70 °C

Front protection
IP 67, IP 65 and IP40, as per EN IEC 60529

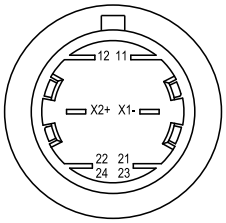
Climate resistance
Damp heat, cyclic
96 hours, +25 °C / 97 %, +55 °C / 93 % relative humidity, as per EN IEC 60068-2-30

Damp heat, state
56 days, +40 °C / 93 % relative humidity, as per EN IEC 60068-2-78

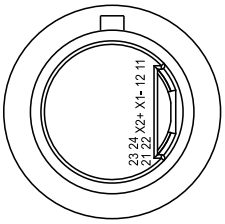
Rapid change of temperature
100 cycles, -40 °C ... +80 °C, as per EN IEC 60068-2-14

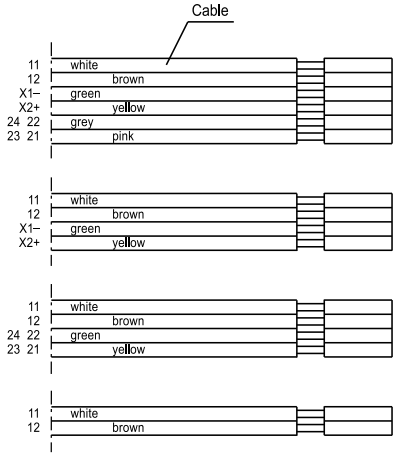
Component layout

1 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



2 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8





	Terminals
1 NC + 1 NO	11 / 12 + 23 / 24
2 NC	11 / 12 + 21 / 22
Illumination	X1– / X2+

	Terminals
1 NC	11 / 12
Illumination	X1– / X2+

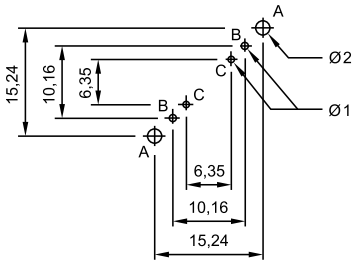
	Terminals
1 NC + 1 NO	11 / 12 + 23 / 24
2 NC	11 / 12 + 21 / 22

	Terminals
1 NC	11 / 12

3 Illumination element with PCB terminal page 19

Drilling plan (Elementside)

A Fixing holes for mounting flange
B Holes for LED
C Holes for centering pins

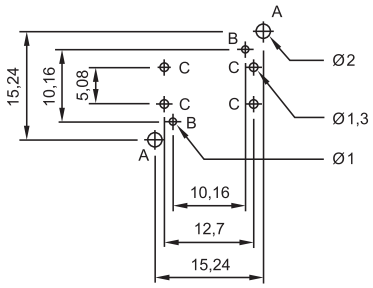


Libraries for the PCB layout-system p-cad 200X see : www.pcad.com/en/library Third-party Libraries

4 Switching element illuminative with PCB terminal page 18

Drilling plan (Elementside)

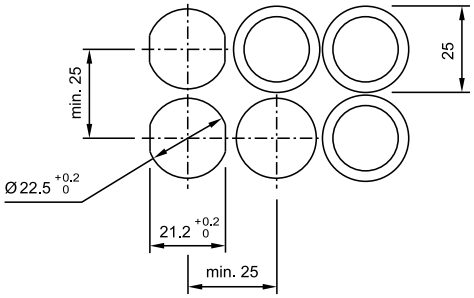
A Fixing holes for mounting flange
B Fixing holes for LED
C Holes for contact pins
pad max. 2.5 mm dia.
through-connection recommended



Libraries for the PCB layout-system p-cad 200X see : www.pcad.com/en/library Third-party Libraries

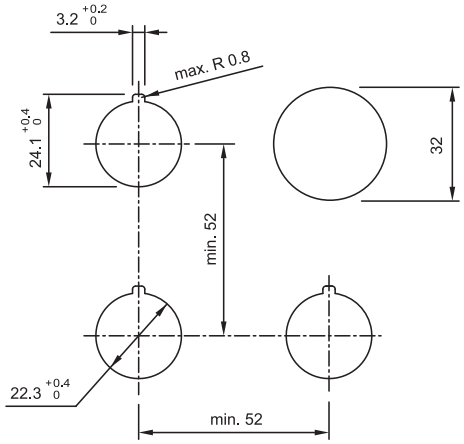
Mounting dimensions

1 Indicator actuator, flush mounting page 9 **| Illuminated pushbutton actuator, flush mounting** page 10

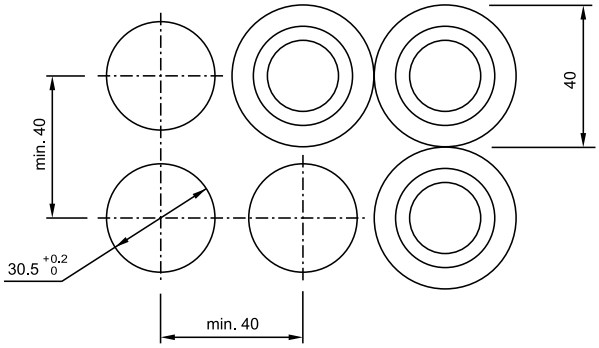


Hole spacing 31 mm min. by using blind plug 704.960.4

2 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8

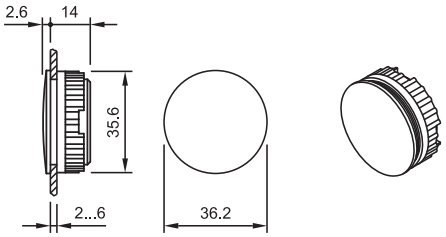


3 Illuminated pushbutton actuator, flush mounting page 10

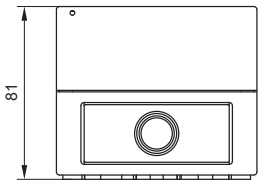


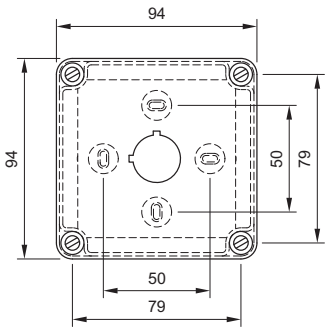
Technical drawing

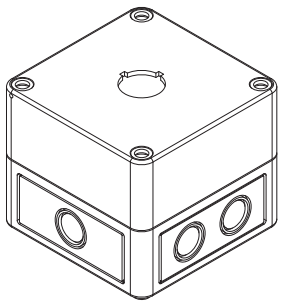
1 Blind plug page 14



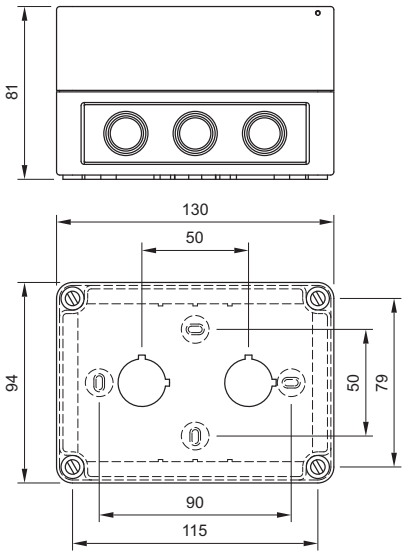
2 Stop pushbutton enclosure page 22

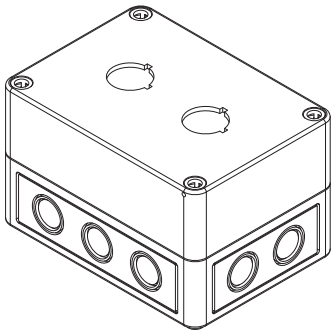




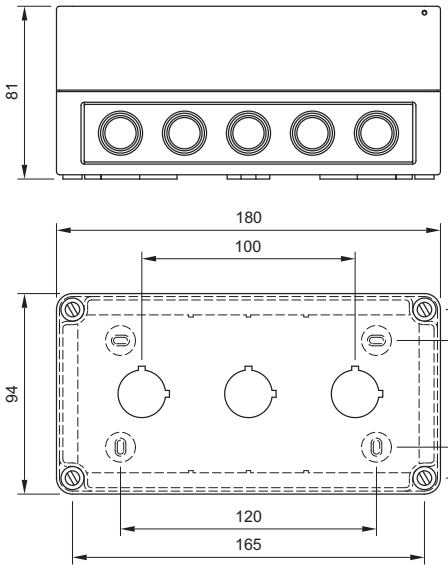


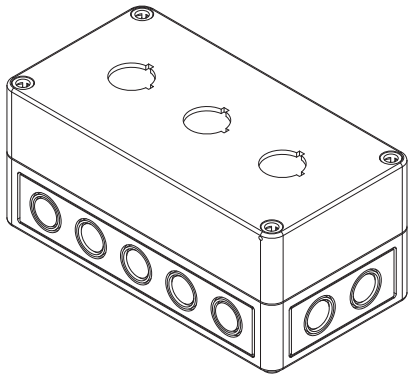
3 Stop pushbutton enclosure page 22



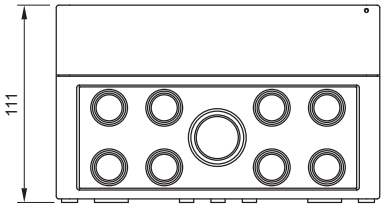


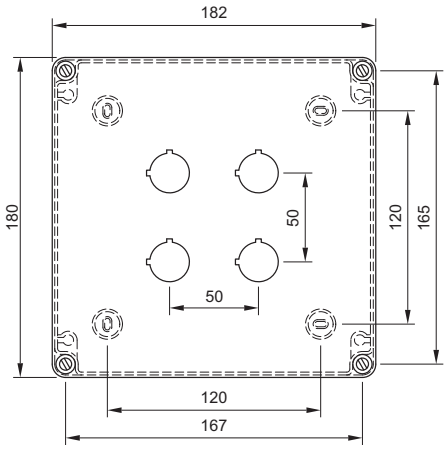
4 Stop pushbutton enclosure page 22

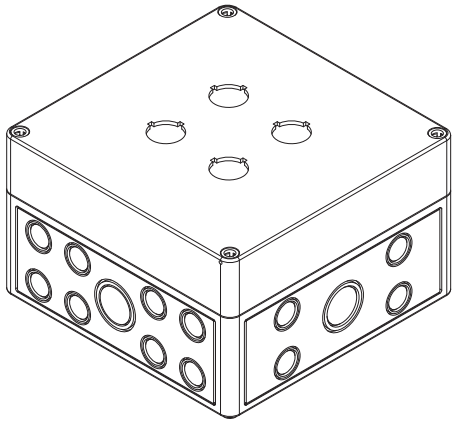




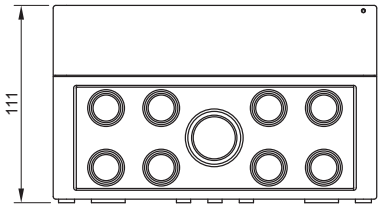
5 Stop pushbutton enclosure page 22

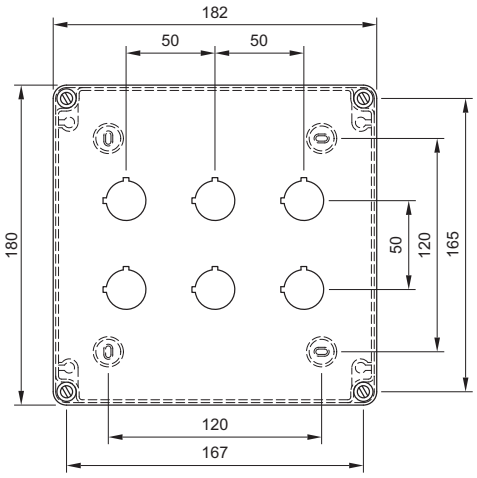


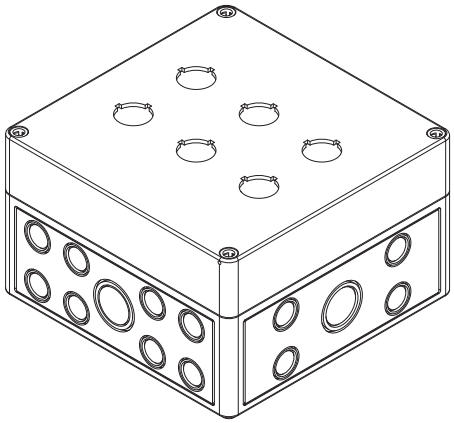




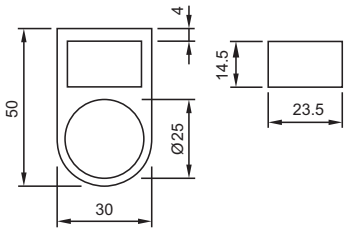
6 Stop pushbutton enclosure page 22



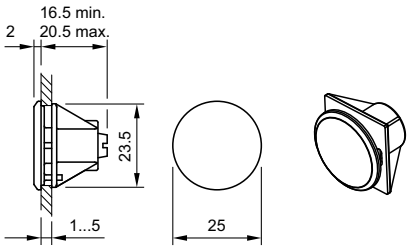




7 Legend frame page 13

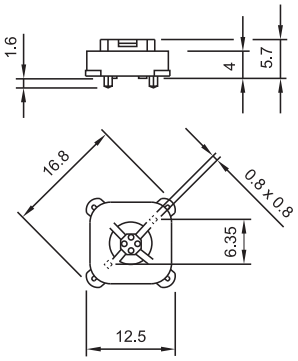


8 Blind plug page 14

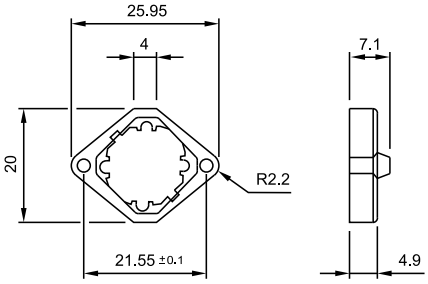


With this print version of the series 84, the panel thickness is reduced to 2.5 mm max.

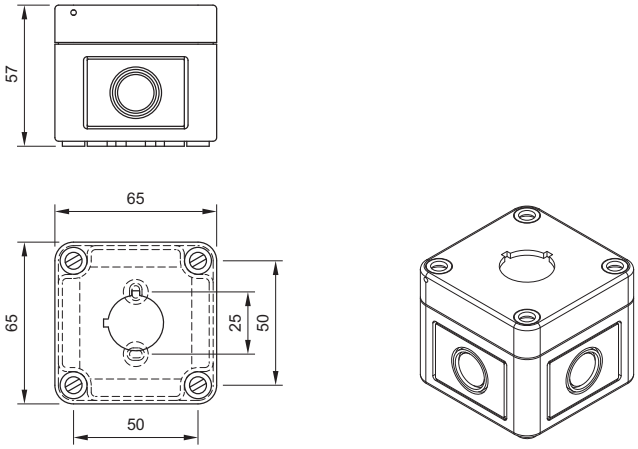
9 Illumination element with PCB terminal page 19



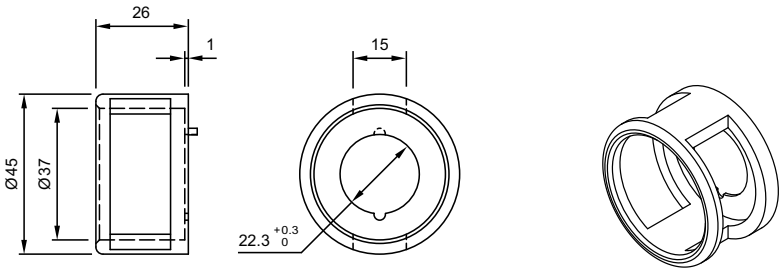
10 Mounting flange page 19



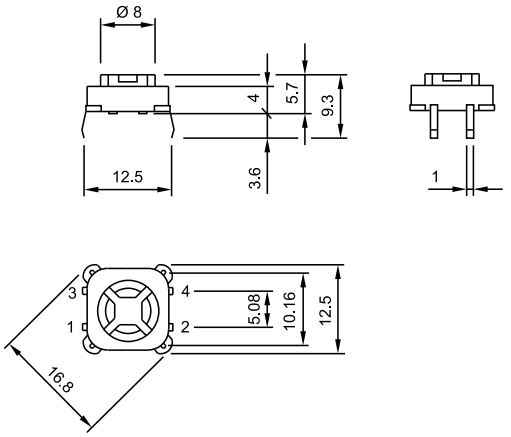
11 Emergency-stop enclosures page 21



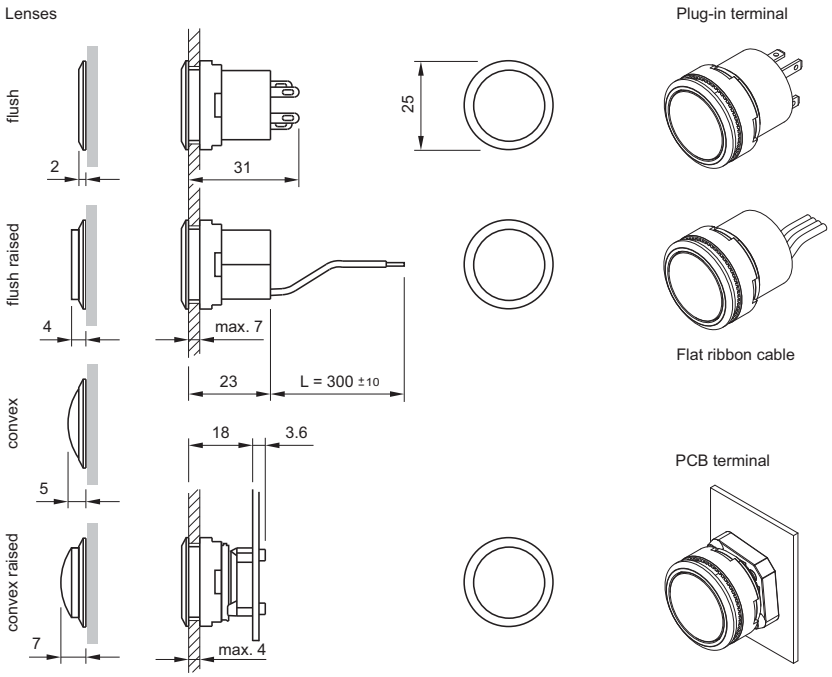
12 Emergency-stop protective shroud page 21



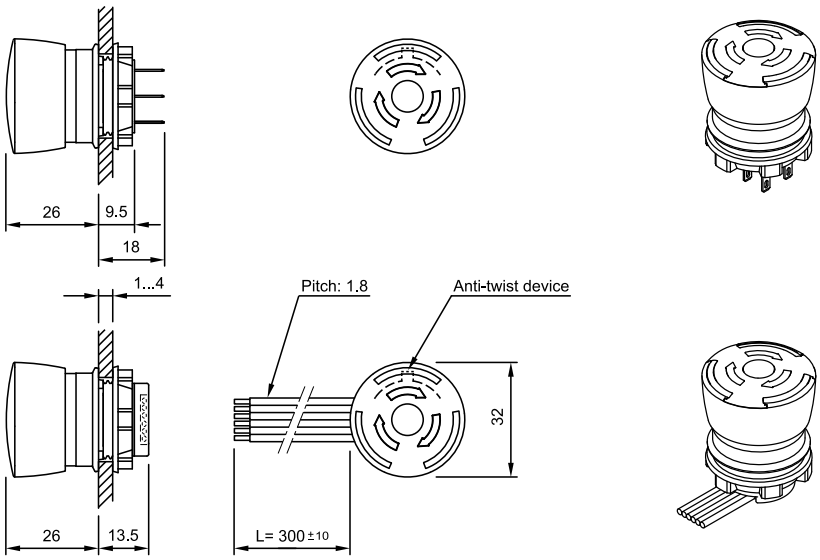
13 Switching element illuminative with PCB terminal page 18



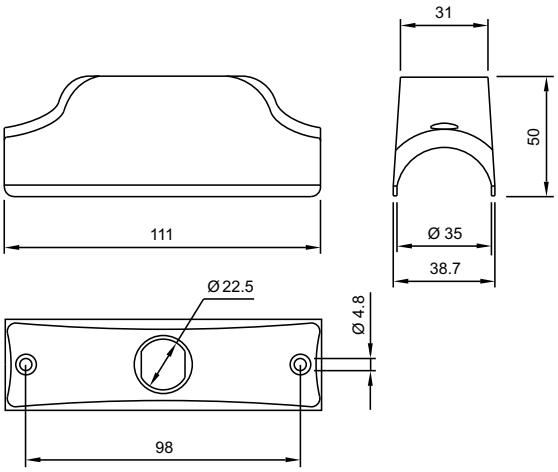
14 Indicator actuator, flush mounting page 9 **| Illuminated pushbutton actuator, flush mounting** page 10



15 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8

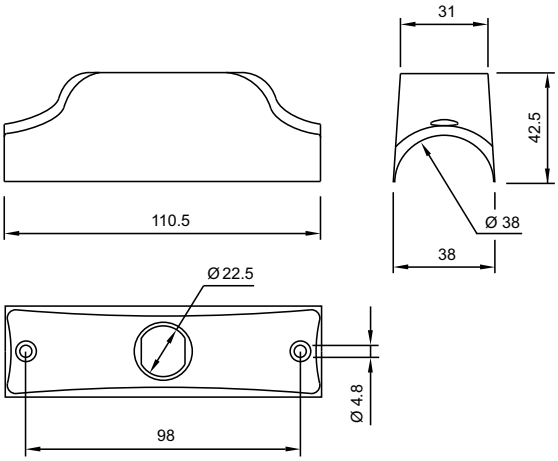


16 Housing, pole mounting 35 mm dia. page 23



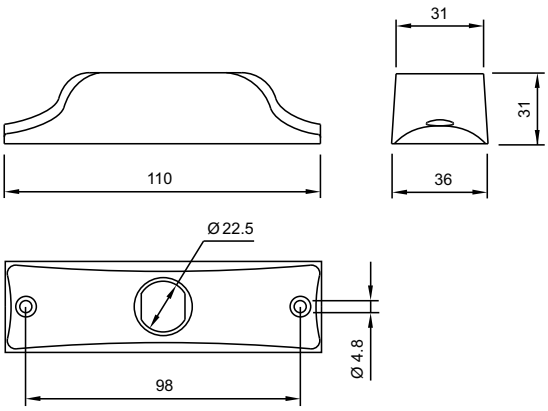
Please note: The cut-out of the pole must read min. 22 mm dia. and needs to be aligned with the switch!

17 Housing, pole mounting 38 mm dia. page 23



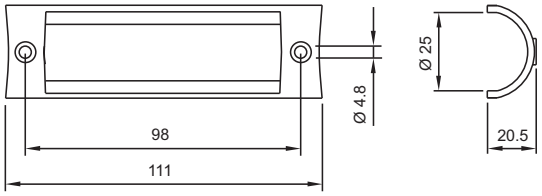
Please note: The cut-out of the pole must read min. 22 mm dia. and needs to be aligned with the switch!

18 Housing, wall mounting page 24

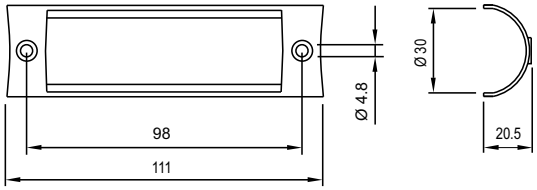


Please note: The cut-out of the wall must read min. 22 mm dia. and needs to be aligned with the switch!

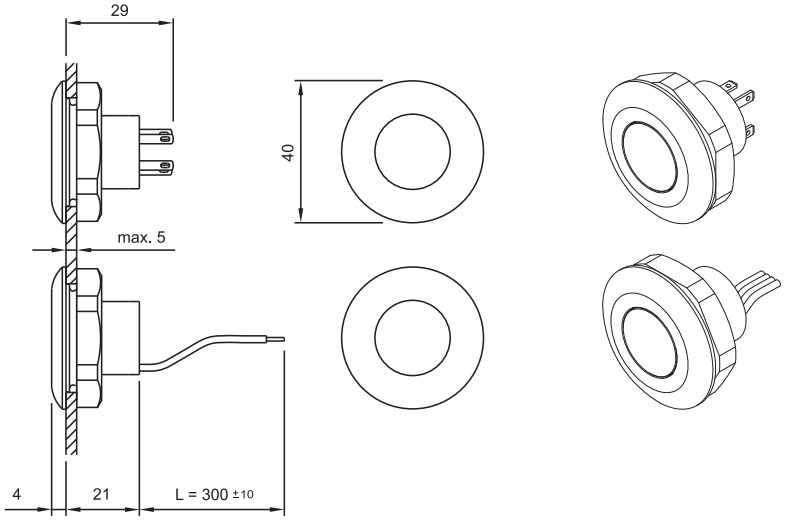
19 Adaptor, reducing to 25 mm dia. page 24



20 Adaptor, reducing to 30 mm dia. page 23

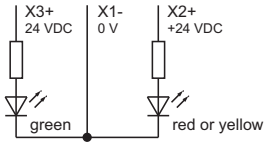


21 Illuminated pushbutton actuator, flush mounting page 10

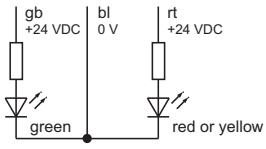


Circuit drawing

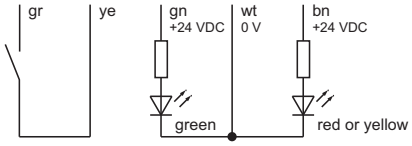
1 Illumination element with Bi-Color illumination page 16



2 Illumination element with Bi-Color illumination page 16

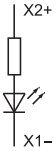


3 Switching element with Bi-Color illumination page 18



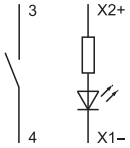
4 Illuminated pushbutton actuator, flush mounting page 10

5 Illumination element page 15

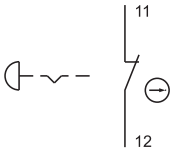


6 Switching element non-illuminated page 18

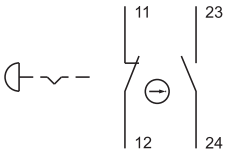
7 Switching element illuminated page 17



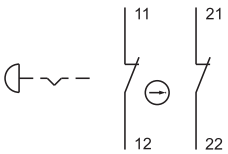
8 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



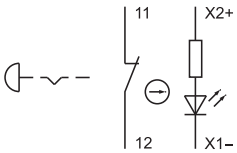
9 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



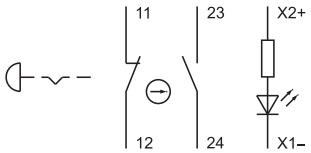
10 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



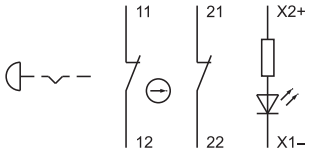
11 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



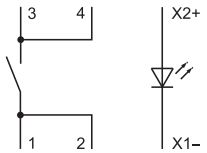
12 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



13 Emergency-stop pushbutton, foolproof EN IEC 60947-5-5, complete page 7 **| Stop pushbutton grey, complete** page 8



14 Switching element illuminative with PCB terminal page 18



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