

Series
45
Catalogue

www.eao.com



Expert manufacturers. *EAO creates possibilities. Since 1947.*



Founding year: 1947

Number of employees: 600

Headquarters: Olten, Switzerland

Manufacturing Companies: Switzerland,
Germany, North America, China

Sales Companies: 10

Distribution countries: 50

Core markets: Transportation, Automotive,
Heavy Duty & Special Vehicles, Machinery

EAO AG, a Swiss, family-owned company founded in 1947, has developed into one of the world's leading manufacturers of high-quality industrial switches, complete custom HMI panels and interface systems, and specialised automotive switch systems.

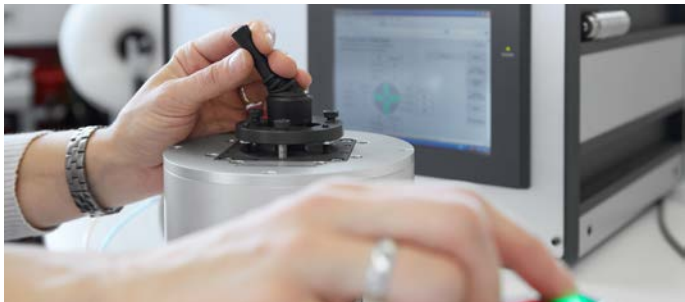
Efficient and modern development processes, effective global supply chains and skilled project and consultation management represent additional services that we offer our customers and business partners around the world.

Your solution-focused expert and partner

We do much more than just manufacture individual control elements. As a solution-focused partner, we provide the option of technically and mechanically customizing existing HMI Components in line with our customers' individual requirements. From simple control elements through to sophisticated HMI Systems, from serial production through to installation – we offer the entire range of HMI services and inspire the confidence of our customers.

Customer-oriented.

More than an expert, a partner.



Being close to customers and able to offer a comprehensive range of services are fundamental to our success and at the core of our corporate policy.

EAO's production sites in Switzerland, Germany, North America and China combine volume production, development, research, and logistics. In addition to these centres of competence, EAO has 10 sales companies around the world at its disposal.

Thanks to this comprehensive network and our 50 distribution companies in the major industrialized countries, EAO is represented wherever interactions between humans and machines play key roles.

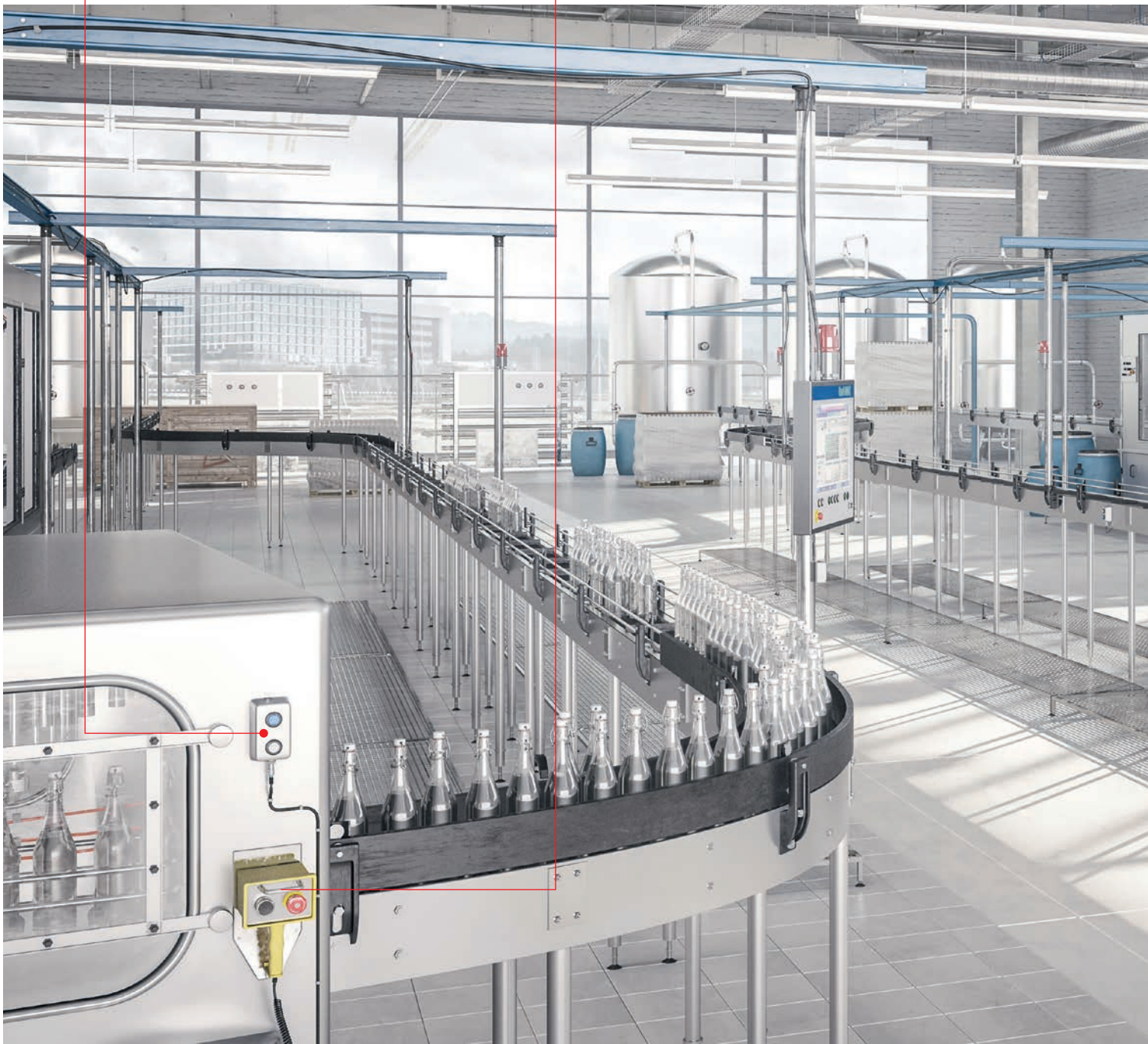
Control. *For every application.*

Operator Device

Actuators and indicators for controlling specific and basic machine functions.

Handheld Control Unit

HMI solutions for mobile control units.



Regardless of the industrial demands placed on our HMI Components and Systems, reliability, longevity, intuitive operation and safety are always at the heart of our products and solutions. Our aim is to provide control over these processes and to afford machine operators the greatest possible level of protection at all times.

Main Operator Panel

HMI Components and Systems for main control units for the overall control of machinery.



Series 45.

Modular, aesthetic and robust in use.



Innovative and comprehensive *Series 45*

EAO's Series 45 unites an extremely broad range of machine operating functions with outstanding technical properties. Penetration by dust and liquids is prevented even under the most adverse conditions.

Robust industrial control system

Resistant to aggressive cleaning agents, oils, dyes and other chemical substances, the actuators and indicators of the new Series 45 work perfectly each and every time. Our HMIs literally keep their cool in the face of high humidity and extreme fluctuations in temperature. Functionality is preserved even when the control units are subjected to dust or water at high pressures (IP69K). Series 45 is ideal for use in the most adverse conditions.

High level of modularity

Their modular construction ensures that our HMI Components all operate smoothly with each other. They are straightforward to install and can also be integrated easily into decentralised systems.

Full functionality

Every conceivable HMI function can be performed by products from Series 45. Pushbuttons, illuminated pushbuttons, indicators, selector switches, keylock switches, toggle sticks and emergency stop switches are capable of handling all major functions.

Major benefits

- Comprehensive Series
- Easy to use, modular construction and rapid assembly without special tools
- Rugged in use; IP69K front protection and metal models
- Modern design thanks to flush mounting, attractive illumination and metallic or plastic appearance
- Low energy consumption thanks to LEDs
- Long service life (up to 10 million switching cycles)

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45 Numbering structure

Indicator

45 - 2 T XX . X X X 0 . 0 0 0

Actuator

T = Indicator

Function

00 = Full face illumination

07 = Front illumination

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

F = flush

0 = raised

Colour

E = red transparent

F = amber transparent

G = yellow transparent

H = green transparent

J = blue transparent

K = colourless transparent

N = white transparent

Buzzer

45 - 2 H 00 . X 0 1 X . 0 0 0

Actuator

H = Buzzer

Material

1 = Plastic

2 = Metal

Operating voltage

6 = 24 VAC/DC

7 = 110 VAC

8 = 230 VAC

45 Numbering structure

Pushbutton

45 - 2 1 XX . X X X 0 . 0 0 0

Actuator

1 = Pushbutton

Function

31 = 2 positions, momentary

34 = 2 positions, maintain, push to release

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

1 = raised/lens level with front ring

2 = raised/lens raised above front ring

3 = raised/lens lower than front ring

4 = raised/lens lower than front ring, with castellations

F = flush

Colour

1 = black

2 = red

4 = yellow

5 = green

6 = blue

8 = grey

9 = white

K = clear transparent

Double pushbutton, Double pushbutton illuminated

45 - 2 X XX . X X X 0 . 0 0 0

Actuator

J = Double pushbutton

K = Double pushbutton illuminated

Function

31 = 2 positions, momentary

Material

1 = Plastic

2 = Metal

3 = Metal / plastic

Shape of handle

5 = 2 lenses level with front ring

6 = lens level with front ring/ lens level raised above front ring

Colour

T = green/red

V = white/black

45 Numbering structure

Illuminated pushbutton

45 - 2 2 XX . X X X 0 . 0 0 0

Actuator

2 = Illuminated pushbutton

Function

31 = 2 positions, momentary

34 = 2 positions, maintain, push to release

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

1 = raised/lens level with front ring

2 = raised/lens raised above front ring

4 = raised/lens lower than front ring, with castellations

F = flush

Colour

E = red transparent

F = amber transparent

G = yellow transparent

H = green transparent

J = blue transparent

K = colourless transparent

N = white transparent

Emergency stop switch

45 - 2 X XX . X X X 0 . 0 0 0

Actuator

- C = Emergency stop switch
- D = Emergency stop switch, illuminated

Function

- 35 = Key to release
- 36 = Twist to release
- 37 = Pull to release

Material

- 1 = Plastic
- 2 = Metal

Shape of handle or front ring

- 8 = Diameter 30 mm
- 9 = Diameter 40 mm
- A = Diameter 60 mm

Colour

- 2 = red

45 Numbering structure

Stop switch

45 - 2 7 XX . X X X 0 . 0 0 0

Actuator

7 = Stop switch

Function

36 = Twist to release

Material

1 = Plastic

2 = Metal

Shape of handle or front ring

9 = Diameter 40 mm

Colour

1 = black

Palm switch

45 - 4 8 X . X 8 1 0

Actuator

8 = Palm switch

Function

1 = Momentary

2 = Maintain

Material

1 = Plastic

2 = Metal

45 Numbering structure

Mushroom-head pushbutton

45 - 2 X XX . X X X 0 . 0 0 0

	2	X	XX	.	X	X	X	0	.	0	0	0
Actuator												
5 = Mushroom-head pushbutton												
6 = Mushroom-head pushbutton, illuminated												
Function												
30 = 2 positions, maintain, pull release												
31 = 2 positions, momentary												
32 = 3 positions, maintain/momentary, pull release												
Material												
1 = Plastic												
2 = Metal												
3 = Metal/plastic												
Shape of handle or front ring												
8 = Diameter 30 mm												
9 = Diameter 40 mm												
A = Diameter 60 mm												
Colour												
1 = black												
2 = red												
4 = yellow												
5 = green												

Keylock switch

45 - 2 9 XX . X X 0 0 . X X X

Actuator

9 = Keylock switch

Function

0C = 3 positions, maintain, key remove L/R

0D = 3 positions, maintain, key remove L

0F = 3 positions, maintain, key remove L/C/R

0G = 3 positions, maintain, key remove L/C

0H = 2 positions, maintain, key remove L/R

0J = 2 positions, maintain, key remove L

0K = 2 positions, maintain, key remove L

0Z = 3 positions, maintain, key remove C

11 = 3 positions, momentary/maintain, key remove C

17 = 3 positions, maintain, key remove R

22 = 3 positions, maintain/momentary, key remove C

24 = 3 positions, maintain, key remove C

25 = 2 positions, maintain, key remove R

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

F = flush

0 = raised

Lock System

1 = RONIS

Key

1 = T254

Angle

1 = 90° (V-Pos)

3 = 2x45° (V-Pos)

6 = 45° (0-Pos.12 o'clock)

45 Numbering structure

Selector switch

45 - 2 8 XX . X X X 0 . 0 0 X

Actuator

8 = Selector switch

Function

0S = 3 positions, momentary

0X = 3 positions, momentary L, maintain R

16 = 3 positions, momentary R, maintain L

19 = 3 positions, maintain

28 = 2 positions, maintain

44 = 2 positions, momentary

45 = 4 positions, Maintain, (0-Position 15h/18h/21h/12h)

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

C = short lever

D = long lever

E = round lever

Colour

2 = red

4 = yellow

5 = green

6 = blue

9 = white

Angle

1 = 90° (V-Pos)

2 = 4x90°

3 = 2x45° (V-Pos)

6 = 45° (0-Pos.12 o'clock)

Potentiometer

45 - 2 P XX . X X X 0 . 0 0 0

Actuator

P = Potentiometer

Function

01 = 100kOhm

02 = 10kOhm

03 = 1kOhm

04 = 4.7kOhm

05 = 470kOhm

06 = 47kOhm

Material

1 = Plastic

2 = Metal

Shape of handle or front ring

E = round lever

Colour

1 = black

45 Numbering structure

Toggle stick

45 - 2 F XX . X X X 0 . 0 0 0

Actuator

F = Toggle stick

Function

0T = 2 positions, momentary, L/R

0V = 4 positions, momentary, L/R/U/D

13 = 2 positions, momentary, L/R, lockable C

14 = 4 positions, momentary, L/R/U/D, lockable C

20 = 2 positions, maintain, L/R

21 = 4 positions, maintain, L/R/U/D

26 = 2 positions, maintain, L/R, lockable C

27 = 4 positions, maintain, L/R/U/D, lockable C

38 = 2 positions, momentary U/D

40 = 2 positions, momentary, U/D, lockable C

41 = 2 positions, maintain, U/D

43 = 2 positions, maintain, U/D, lockable

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

Colour

1 = black

Toggle switch

45 - 2 N XX . X 0 1 0 . 0 0 0

Actuator

N = Toggle switch

Funktion

39 = 2 positions, momentary

42 = 2 positions, maintain

Material

1 = Plastic

2 = Metal

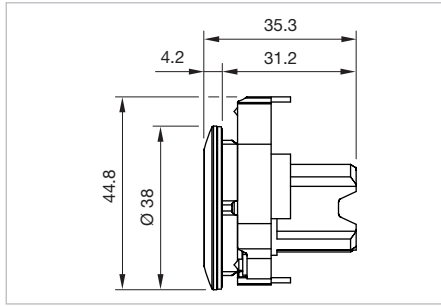
3 = Metal/plastic

45 Flush design

Indicator, IP66, IP67, IP69K

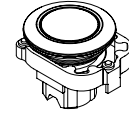


Product can differ from the current configuration.

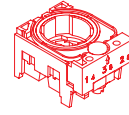


Dimensions [mm]

Equipment consisting of (schematic overview)

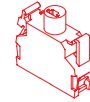


Actuator



Holder

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Illumination element

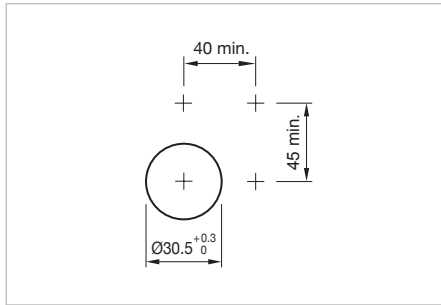
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Each Part Number listed below includes all the black components shown in the 3D-drawing.






To obtain a complete unit, please select the red components from the pages shown.

Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- Front panel thickness 1 ... 6 mm

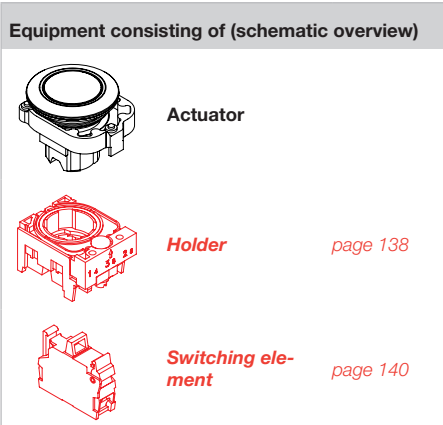


Mounting cut-outs [mm]

LED colour	Front bezel	Lens cap	Part No.	Weight
	Indicator actuator, Front dimension Ø 38 mm			
red	Metal sandgrey	Plastic red	45-2T07.4FE0.000	0,048 kg
	Indicator actuator, Front dimension Ø 38 mm			
yellow	Metal sandgrey	Plastic yellow	45-2T07.4FG0.000	0,048 kg
	Indicator actuator, Front dimension Ø 38 mm			
green	Metal sandgrey	Plastic green	45-2T07.4FH0.000	0,048 kg
	Indicator actuator, Front dimension Ø 38 mm			
blue	Metal sandgrey	Plastic blue	45-2T07.4FJ0.000	0,048 kg
	Indicator actuator, Front dimension Ø 38 mm			
white	Metal sandgrey	Plastic colourless	45-2T07.4FK0.000	0,048 kg

Pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



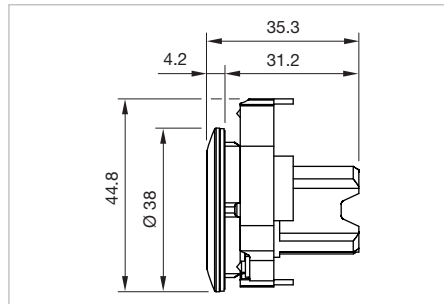
Actuator

Holder *page 138*

Switching element *page 140*

Each Part Number listed below includes all the black components shown in the 3D-drawing.

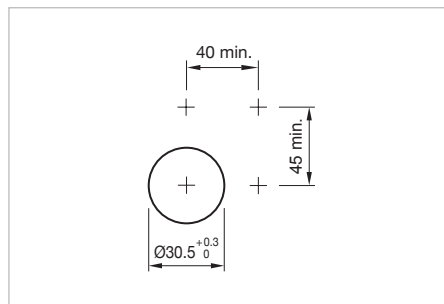
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]








Product can differ from the current configuration.










Mounting cut-outs [mm]



Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- Front panel thickness 1 ... 6 mm

Front bezel	Lens	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic black	Slow-make switching element	Momentary	45-2131.4F10.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic red	Slow-make switching element	Momentary	45-2131.4F20.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic yellow	Slow-make switching element	Momentary	45-2131.4F40.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic green	Slow-make switching element	Momentary	45-2131.4F50.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic blue	Slow-make switching element	Momentary	45-2131.4F60.000	1	0,048 kg

45 Flush design

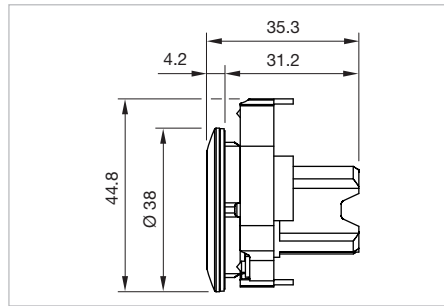
Front bezel	Lens	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 38 mm					
Metal sandgrey	Plastic white	Slow-make switching element	Momentary	45-2131.4F90.000	1	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic black	Slow-make switching element	Maintained	45-2134.4F10.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic red	Slow-make switching element	Maintained	45-2134.4F20.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic yellow	Slow-make switching element	Maintained	45-2134.4F40.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic green	Slow-make switching element	Maintained	45-2134.4F50.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic blue	Slow-make switching element	Maintained	45-2134.4F60.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 38 mm					
Metal sandgrey	Plastic white	Slow-make switching element	Maintained	45-2134.4F90.000	2	0,048 kg

	
Wiring diagram 1	Wiring diagram 2

Illuminated pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)

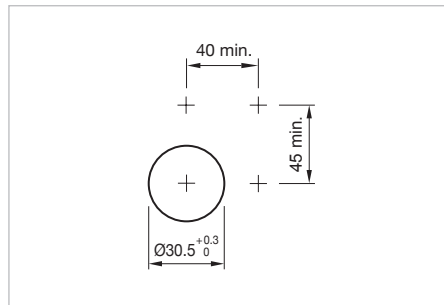
- Actuator**
- Holder** *page138*
- Switching element** *page140*
- Illumination element** *page 144*



Dimensions [mm]



Product can differ from the current configuration.








Mounting cut-outs [mm]

Additional Information






- Mounting depth incl. front plate, see chapter «drawings»
- Front panel thickness 1 ... 6 mm

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

LED colour	Front bezel	Lens	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p>							
red	Metal sandgrey	Plastic red transparent	Slow-make switching element	Momentary	45-2231.4FE0.000	1	0,048 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p>							
yellow	Metal sandgrey	Plastic yellow transparent	Slow-make switching element	Momentary	45-2231.4FG0.000	1	0,048 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p>							
green	Metal sandgrey	Plastic green transparent	Slow-make switching element	Momentary	45-2231.4FH0.000	1	0,048 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p>							
blue	Metal sandgrey	Plastic blue transparent	Slow-make switching element	Momentary	45-2231.4FJ0.000	1	0,048 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p>							
white	Metal sandgrey	Plastic colourless transparent	Slow-make switching element	Momentary	45-2231.4FK0.000	1	0,048 kg

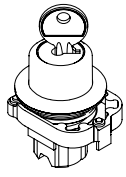
45 Flush design

LED colour	Front bezel	Lens	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm</p>							
red	Metal sandgrey	Plastic red transparent	Slow-make switching element	Maintained	45-2234.4FE0.000	2	0,048 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm</p>							
yellow	Metal sandgrey	Plastic yellow transparent	Slow-make switching element	Maintained	45-2234.4FG0.000	2	0,048 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm</p>							
green	Metal sandgrey	Plastic green transparent	Slow-make switching element	Maintained	45-2234.4FH0.000	2	0,048 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm</p>							
blue	Metal sandgrey	Plastic blue transparent	Slow-make switching element	Maintained	45-2234.4FJ0.000	2	0,048 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm</p>							
white	Metal sandgrey	Plastic colourless transparent	Slow-make switching element	Maintained	45-2234.4FK0.000	2	0,048 kg

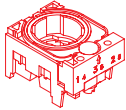
E---	E~--
Wiring diagram 1	Wiring diagram 2

Keylock switch 2 and 3 positions, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Actuator



Holder

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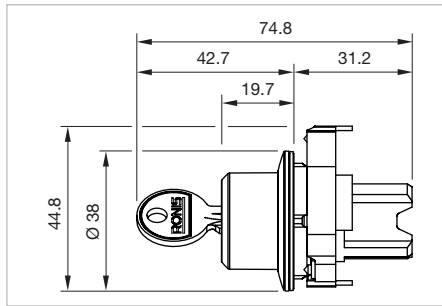


Switching element

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Each Part Number listed below includes all the black components shown in the 3D-drawing.

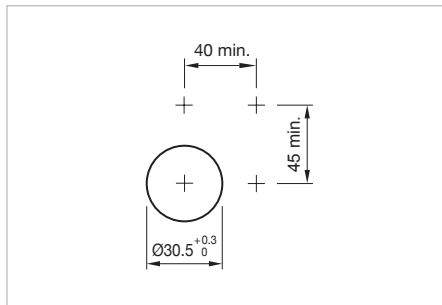
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Product can differ from the current configuration.



Mounting cut-outs [mm]

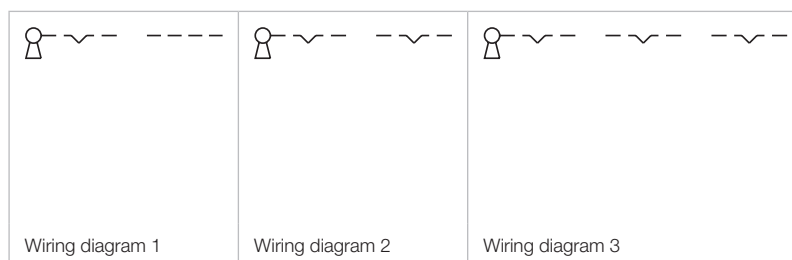
Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- Front panel thickness 1 ... 6 mm
- The standard lock: RONIS, T254
- Two keys are supplied with each key lock switch



Switching positions (A = Rest, B = Momentary, C = Maintained)

Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
<p>Keylock switch 2 positions, Front dimension Ø 38 mm</p>					
Metal sandgrey	Rest(a) - Momentary	45° right	45-290J.4F00.116	1	0,090 kg
Metal sandgrey	Rest(a) - Maintain(a)	90° right	45-290H.4F00.111	2	0,090 kg
Metal sandgrey	Rest - Maintain(a)	90° right	45-290J.4F00.111	2	0,090 kg
<p>Keylock switch 3 positions, Front dimension Ø 38 mm</p>					
Metal sandgrey	Maintain(a) - Rest(a) - Maintain(a)	45° left+right	45-290F.4F00.113	3	0,090 kg



Wiring diagram 1

Wiring diagram 2

Wiring diagram 3

45 Flush design

Selector switch actuator 2 positions short lever, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

- It is advisable to choose a white illumination
- Mounting depth incl. front plate, see chapter «Drawings»
- Front panel thickness 1 ... 6 mm
- Illumination elements are optional



Mounting cut-outs [mm]

Equipment consisting of (schematic overview)



Actuator



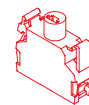
Holder

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Switching element

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Illumination element





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Each Part Number listed below includes all the black components shown in the 3D-drawing.

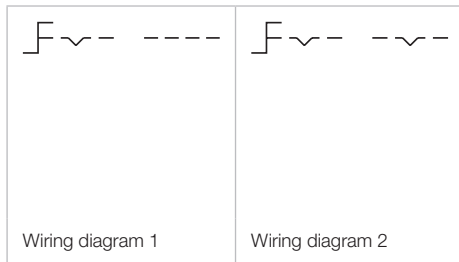
To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm					
Plastic red short	Metal sandgrey	Rest - Maintain	45° right	45-2844.4C20.006	1	0,055 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm					
Plastic green short	Metal sandgrey	Rest - Maintain	45° right	45-2844.4C50.006	1	0,055 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm					
Plastic white short	Metal sandgrey	Rest - Maintain	45° right	45-2844.4C90.006	1	0,055 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm					
Plastic red short	Metal sandgrey	Rest - Maintain	90° right	45-2828.4C20.001	2	0,055 kg

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm</p>						
Plastic green short	Metal sandgrey	Rest - Maintain	90° right	45-2828.4C50.001	2	0,055 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm</p>						
Plastic white short	Metal sandgrey	Rest - Maintain	90° right	45-2828.4C90.001	2	0,055 kg

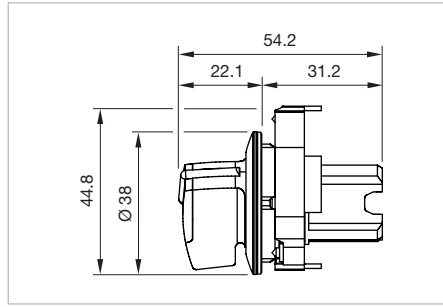


45 Flush design

Selector switch 2 positions long lever, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

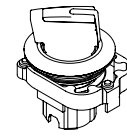
Additional Information

- It is advisable to choose a white illumination
- Mounting depth incl. front plate, see chapter «Drawings»
- Front panel thickness 1 ... 6 mm
- Illumination elements are optional

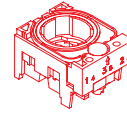


Mounting cut-outs [mm]

Equipment consisting of (schematic overview)



Actuator



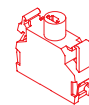
Holder

page 138



Switching element

page 140



Illumination element





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Each Part Number listed below includes all the black components shown in the 3D-drawing.

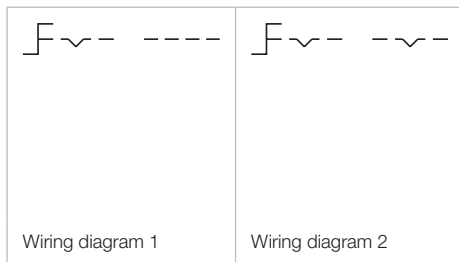
To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm					
Plastic red long	Metal sandgrey	Rest - Maintain	45° right	45-2844.4D20.006	1	0,055 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm					
Plastic green long	Metal sandgrey	Rest - Maintain	45° right	45-2844.4D50.006	1	0,055 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm					
Plastic white long	Metal sandgrey	Rest - Maintain	45° right	45-2844.4D90.006	1	0,055 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm					
Plastic red long	Metal sandgrey	Rest - Maintain	90° right	45-2828.4D20.001	2	0,055 kg

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm</p>						
Plastic green long	Metal sandgrey	Rest - Maintain	90° right	45-2828.4D50.001	2	0,055 kg
 <p>Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm</p>						
Plastic white long	Metal sandgrey	Rest - Maintain	90° right	45-2828.4D90.001	2	0,055 kg



45 Flush design

Selector switch 3 positions short lever, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

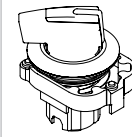
Additional Information

- It is advisable to choose a white illumination
- Mounting depth incl. front plate, see chapter «drawings»
- Front panel thickness 1 ... 6 mm
- Illumination elements are optional

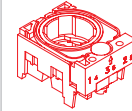


Mounting cut-outs [mm]

Equipment consisting of (schematic overview)



Actuator



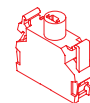
Holder

page138



Switching element

page140



Illumination element





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Each Part Number listed below includes all the black components shown in the 3D-drawing.

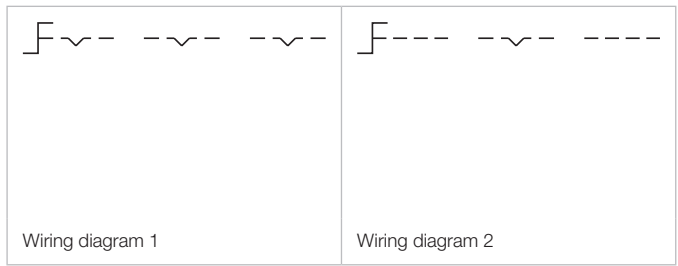
To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm					
Plastic red short	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4C20.003	1	0,055 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm					
Plastic green short	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4C50.003	1	0,055 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm					
Plastic white short	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4C90.003	1	0,055 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm					
Plastic red short	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4C20.003	2	0,055 kg

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm</p>						
Plastic green short	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4C50.003	2	0,055 kg
 <p>Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm</p>						
Plastic white short	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4C90.003	2	0,055 kg



45 Flush design

Selector switch 3 positions long lever, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

- It is advisable to choose a white illumination
- Mounting depth incl. front plate, see chapter «Drawings»
- Front panel thickness 1 ... 6 mm
- Illumination elements are optional



Mounting cut-outs [mm]

Equipment consisting of (schematic overview)



Actuator



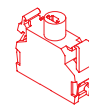
Holder

page 138



Switching element

page 140



Illumination element





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Each Part Number listed below includes all the black components shown in the 3D-drawing.

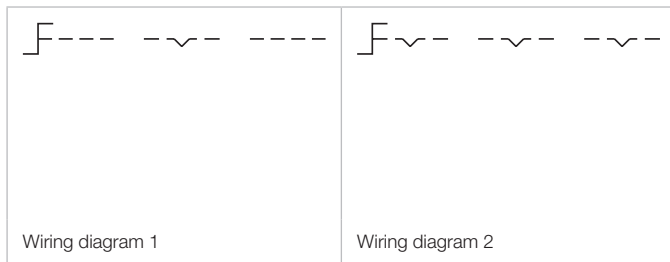
To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm					
Plastic red long	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4D20.003	1	0,055 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm					
Plastic green long	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4D50.003	1	0,055 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm					
Plastic white long	Metal sandgrey	Maintain - Rest - Maintain	45° left+right	45-2819.4D90.003	1	0,055 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm					
Plastic red long	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4D20.003	2	0,055 kg

Lever	Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm</p>						
Plastic green long	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4D50.003	2	0,055 kg
 <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm</p>						
Plastic white long	Metal sandgrey	Momentary - Rest - Momentary	45° left+right	45-280S.4D90.003	2	0,055 kg

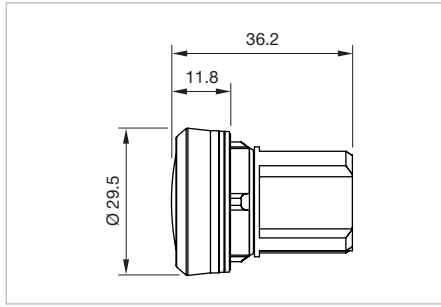


45 Raised design

Indicator full face illumination, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator



Holder

page 138

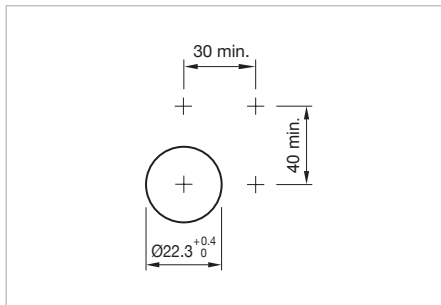


Illumination element

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Additional Information






- Mounting depth incl. front plate, see chapter «drawings»






Mounting cut-outs [mm]

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

LED colour	Housing material	Lens cap	Part No.	Weight
	Indicator actuator, Front dimension Ø 29,5 mm			
amber	Plastic	Plastic ambergris	45-2T00.10F0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
red	Plastic	Plastic red	45-2T00.10E0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
yellow	Plastic	Plastic yellow	45-2T00.10G0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
green	Plastic	Plastic green	45-2T00.10H0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
blue	Plastic	Plastic blue	45-2T00.10J0.000	0,001 kg

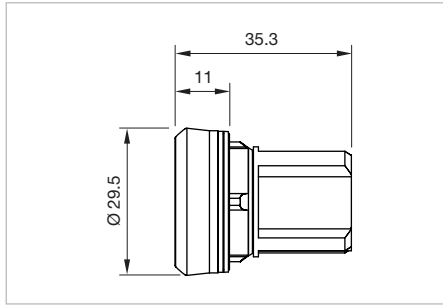
LED colour	Housing material	Lens cap	Part No.	Weight
	Indicator actuator, Front dimension Ø 29,5 mm			
white	Plastic	Plastic white	45-2T00.10N0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
colourless	Plastic	Plastic colourless	45-2T00.10K0.000	0,001 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
amber	Metal	Plastic ambergris	45-2T00.20F0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
red	Metal	Plastic red	45-2T00.20E0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
yellow	Metal	Plastic yellow	45-2T00.20G0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
green	Metal	Plastic green	45-2T00.20H0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
blue	Metal	Plastic blue	45-2T00.20J0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
white	Metal	Plastic white	45-2T00.20N0.000	0,010 kg
	Indicator actuator, Front dimension Ø 29,5 mm			
colourless	Metal	Plastic colourless	45-2T00.20K0.000	0,010 kg

45 Raised design

Indicator front illumination, IP66, IP67, IP69K

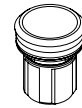


Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)

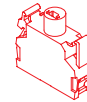


Actuator



Holder

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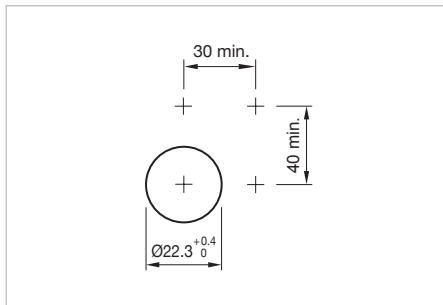


Illumination element

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Additional Information






- Mounting depth incl. front plate, see chapter «drawings»








Mounting cut-outs [mm]

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

LED colour	Front bezel	Lens	Housing material	Part No.	Weight
	Indicator actuator, Front dimension Ø 29,5 mm				
red	Plastic black	Plastic red transparent	Plastic	45-2T07.10E0.000	0,011 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
yellow	Plastic black	Plastic yellow transparent	Plastic	45-2T07.10G0.000	0,011 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
green	Plastic black	Plastic green transparent	Plastic	45-2T07.10H0.000	0,011 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
blue	Plastic black	Plastic blue transparent	Plastic	45-2T07.10J0.000	0,011 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
white	Plastic black	Plastic colourless transparent	Plastic	45-2T07.10K0.000	0,011 kg

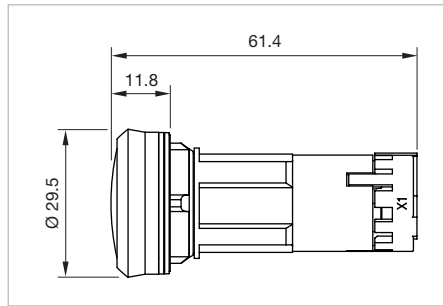
LED colour	Front bezel	Lens	Housing material	Part No.	Weight
	Indicator actuator, Front dimension Ø 29,5 mm				
red	Metal sandgrey	Plastic red transparent	Plastic	45-2T07.30E0.000	0,020 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	45-2T07.30G0.000	0,020 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
green	Metal sandgrey	Plastic green transparent	Plastic	45-2T07.30H0.000	0,020 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
blue	Metal sandgrey	Plastic blue transparent	Plastic	45-2T07.30J0.000	0,020 kg
	Indicator actuator, Front dimension Ø 29,5 mm				
white	Metal sandgrey	Plastic colourless transparent	Plastic	45-2T07.30K0.000	0,020 kg

45 Raised design

Duo indicator, IP66, IP67, IP69K

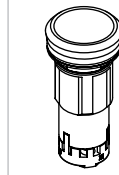


Product can differ from the current configuration.

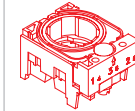


Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator

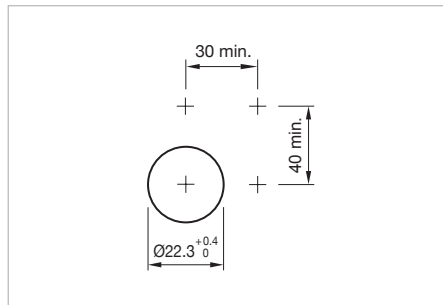


Holder

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Additional Information





- Mounting depth incl. front plate, see chapter «drawings»





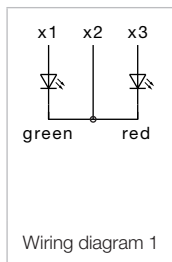
Mounting cut-outs [mm]

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

LED colour	Operating voltage	Housing material	Lens cap	Part No.	Wiring diagram	Weight
	Indicator actuator, Front dimension Ø 29.5 mm					
red/green	6-24 VAC/DC	Plastic	Plastic transparent	45-2G08.10K1.000	1	0.051 kg
	Indicator actuator, Front dimension Ø 29.5 mm					
red/green	110 VAC	Plastic	Plastic transparent	45-2G08.10K7.000	1	0.051 kg
	Indicator actuator, Front dimension Ø 29.5 mm					
red/green	230 VAC	Plastic	Plastic transparent	45-2G08.10K8.000	1	0.051 kg
	Indicator actuator, Front dimension Ø 29.5 mm					
red/green	6-24 VAC/DC	Metal	Plastic transparent	45-2G08.20K2.000	1	0.084 kg

LED colour	Operating voltage	Housing material	Lens cap	Part No.	Wiring diagram	Weight
 <p>Indicator actuator, Front dimension Ø 29.5 mm</p>						
red/green	110 VAC	Metal	Plastic transparent	45-2G08.20K7.000	1	0.084 kg
 <p>Indicator actuator, Front dimension Ø 29.5 mm</p>						
red/green	230 VAC	Metal	Plastic transparent	45-2G08.20K8.000	1	0.084 kg

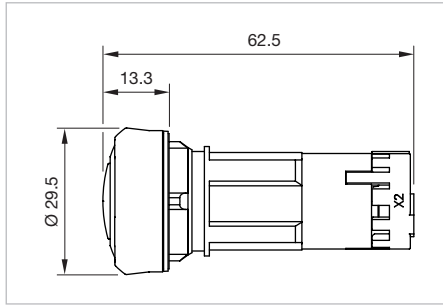


45 Raised design

Buzzer, IP40

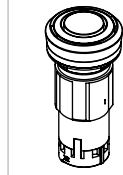


Product can differ from the current configuration.

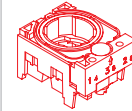


Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator

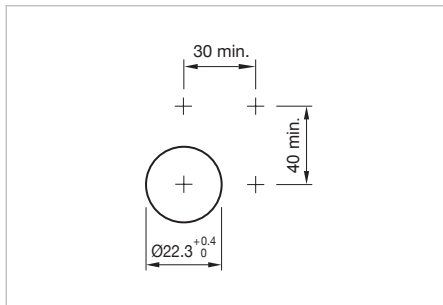


Holder

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Additional Information


- Mounting depth incl. front plate, see chapter «drawings»

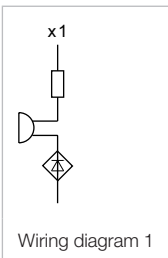


Mounting cut-outs [mm]

Each Part Number listed below includes all the black components shown in the 3D-drawing.

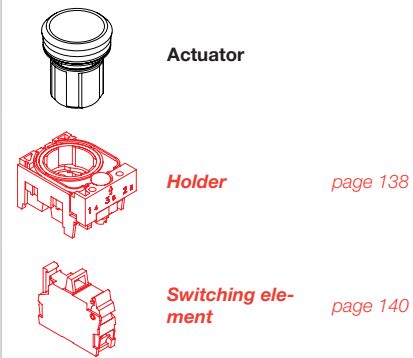
To obtain a complete unit, please select the red components from the pages shown.

Operating voltage	Housing material	Part No.	Wiring diagram	Weight
 <p>Buzzer, Front dimension Ø 29.5 mm</p>				
24 VAC/DC	Plastic	45-2H00.1016.000	1	0.051 kg
110 VAC	Plastic	45-2H00.1017.000	1	0.051 kg
230 VAC	Plastic	45-2H00.1018.000	1	0.051 kg
24 VAC/DC	Metal	45-2H00.2016.000	1	0.084 kg
110 VAC	Metal	45-2H00.2017.000	1	0.084 kg
230 VAC	Metal	45-2H00.2018.000	1	0.084 kg



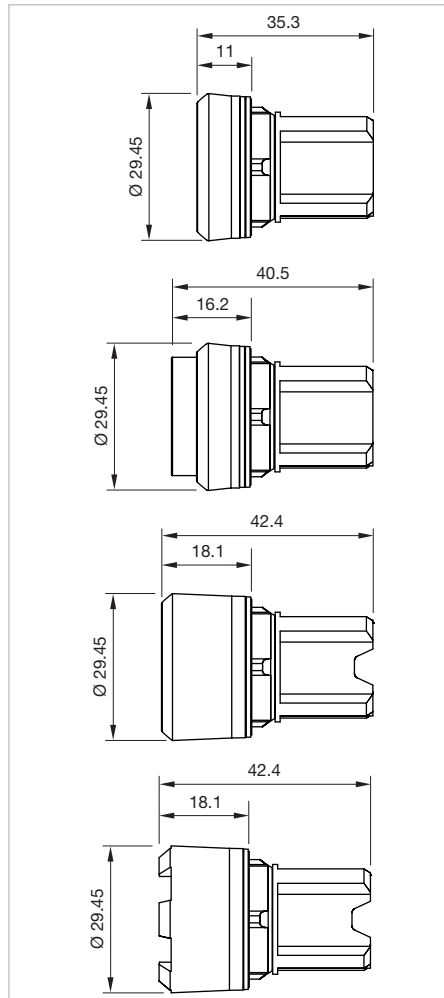
Pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)

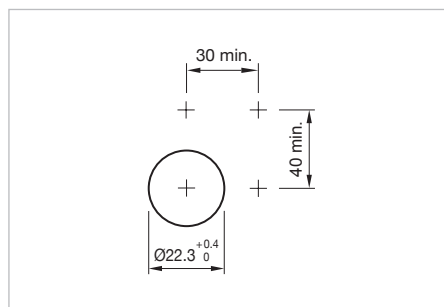


Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Mounting cut-outs [mm]





















Product can differ from the current configuration.

Additional Information










- Mounting depth incl. front plate, see chapter «drawings»










45 Raised design

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.1110.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.1120.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.1140.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.1150.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.1160.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic grey	Plastic	Slow-make switching element	Momentary	45-2131.1180.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.1190.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic colourless	Plastic	Slow-make switching element	Momentary	45-2131.11K0.000	1	0,013 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Maintained	45-2134.1110.000	2	0,013 kg










Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Maintained	45-2134.1120.000	2	0,013 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Maintained	45-2134.1140.000	2	0,013 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Maintained	45-2134.1150.000	2	0,013 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic blue	Plastic	Slow-make switching element	Maintained	45-2134.1160.000	2	0,013 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Plastic black	Plastic white	Plastic	Slow-make switching element	Maintained	45-2134.1190.000	2	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.3110.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.3120.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.3140.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.3150.000	1	0,021 kg










45 Raised design

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.3160.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic grey	Plastic	Slow-make switching element	Momentary	45-2131.3180.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.3190.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic colourless	Plastic	Slow-make switching element	Momentary	45-2131.31K0.000	1	0,021 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Maintained	45-2134.3110.000	2	0,021 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic red	Plastic	Slow-make switching element	Maintained	45-2134.3120.000	2	0,021 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic yellow	Plastic	Slow-make switching element	Maintained	45-2134.3140.000	2	0,021 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic green	Plastic	Slow-make switching element	Maintained	45-2134.3150.000	2	0,021 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic blue	Plastic	Slow-make switching element	Maintained	45-2134.3160.000	2	0,021 kg










Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic white	Plastic	Slow-make switching element	Maintained	45-2134.3190.000	2	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2131.2110.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Momentary	45-2131.2120.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2131.2140.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic green	Metal	Slow-make switching element	Momentary	45-2131.2150.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic blue	Metal	Slow-make switching element	Momentary	45-2131.2160.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic grey	Metal	Slow-make switching element	Momentary	45-2131.2180.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic white	Metal	Slow-make switching element	Momentary	45-2131.2190.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic colourless	Metal	Slow-make switching element	Momentary	45-2131.21K0.000	1	0,048 kg










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Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Maintained	45-2134.2110.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Maintained	45-2134.2120.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic yellow	Metal	Slow-make switching element	Maintained	45-2134.2140.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic green	Metal	Slow-make switching element	Maintained	45-2134.2150.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic blue	Metal	Slow-make switching element	Maintained	45-2134.2160.000	2	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic white	Metal	Slow-make switching element	Maintained	45-2134.2190.000	2	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.1210.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.1220.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.1240.000	1	0,013 kg










Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.1250.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.1260.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.1290.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.3210.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.3220.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.3240.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.3250.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.3260.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.3290.000	1	0,021 kg





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Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2131.2210.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Momentary	45-2131.2220.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2131.2240.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic green	Metal	Slow-make switching element	Momentary	45-2131.2250.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic blue	Metal	Slow-make switching element	Momentary	45-2131.2260.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic white	Metal	Slow-make switching element	Momentary	45-2131.2290.000	1	0,048 kg
	Pushbutton actuator, Maintain, Front dimension Ø 29,5 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Maintained	45-2134.2220.000	2	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.1310.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.1320.000	1	0,013 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.1340.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.1350.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.1360.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.1390.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.3310.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.3320.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.3340.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.3350.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.3360.000	1	0,021 kg

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Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal sandgrey	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.3390.000	1	0,021 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2131.2310.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Momentary	45-2131.2320.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2131.2340.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic green	Metal	Slow-make switching element	Momentary	45-2131.2350.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic blue	Metal	Slow-make switching element	Momentary	45-2131.2360.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Metal silver	Plastic white	Metal	Slow-make switching element	Momentary	45-2131.2390.000	1	0,048 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2131.1410.000	1	0,013 kg
	Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2131.1420.000	1	0,013 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>							
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2131.1440.000	1	0,013 kg
 <p>Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>							
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2131.1450.000	1	0,013 kg
 <p>Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>							
Plastic black	Plastic blue	Plastic	Slow-make switching element	Momentary	45-2131.1460.000	1	0,013 kg
 <p>Pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>							
Plastic black	Plastic white	Plastic	Slow-make switching element	Momentary	45-2131.1490.000	1	0,013 kg

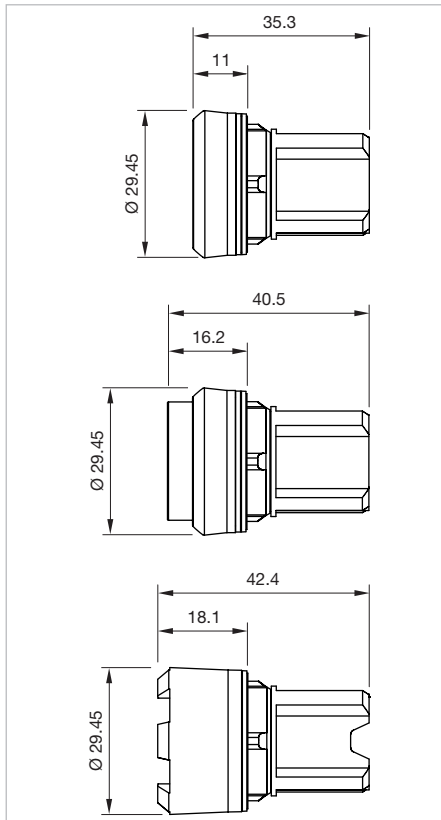
E---	E~--
Wiring diagram 1	Wiring diagram 2

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Illuminated pushbutton, IP66, IP67, IP69K

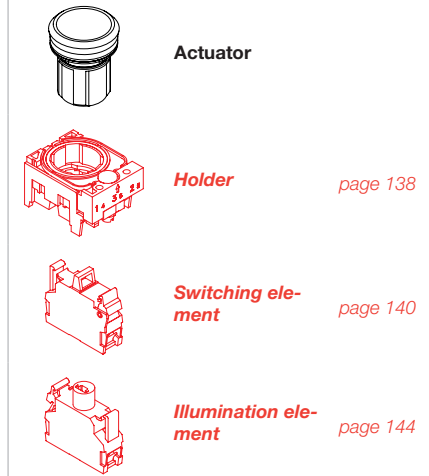


Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)

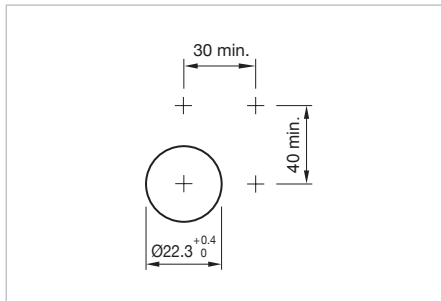


Each Part Number listed below includes all the black components shown in the 3D-drawing.



To obtain a complete unit, please select the red components from the pages shown.










Additional Information

- Mounting depth incl. front plate, see chapter «drawings»




















Mounting cut-outs [mm]

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
amber	Plastic black	Plastic amber transparent	Plastic	Slow-make switching element	Momentary	45-2231.11F0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2231.11E0.000	1	0,011 kg










LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2231.11G0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Plastic black	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2231.11H0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2231.11J0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
white	Plastic black	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2231.11N0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
colourless	Plastic black	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2231.11K0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2234.11E0.000	2	0,011 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2234.11G0.000	2	0,011 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
green	Plastic black	Plastic green transparent	Plastic	Slow-make switching element	Maintained	45-2234.11H0.000	2	0,011 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Maintained	45-2234.11J0.000	2	0,011 kg










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LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
white	Plastic black	Plastic white transparent	Plastic	Slow-make switching element	Maintained	45-2234.11N0.000	2	0,011 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
colourless	Plastic black	Plastic colourless transparent	Plastic	Slow-make switching element	Maintained	45-2234.11K0.000	2	0,011 kg
 <p>Leuchtdrucktasten-Vorsatz, Impuls, Front dimension Ø 29,5 mm</p>								
amber	Metal sandgrey	Plastic amber transparent	Plastic	Slow-make switching element	Momentary	45-2231.31F0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Metal sandgrey	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2231.31E0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2231.31G0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Metal sandgrey	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2231.31H0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Metal sandgrey	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2231.31J0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
white	Metal sandgrey	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2231.31N0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
colourless	Metal sandgrey	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2231.31K0.000	1	0,020 kg









LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
red	Metal sandgrey	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2234.31E0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2234.31G0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
green	Metal sandgrey	Plastic green transparent	Plastic	Slow-make switching element	Maintained	45-2234.31H0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
blue	Metal sandgrey	Plastic blue transparent	Plastic	Slow-make switching element	Maintained	45-2234.31J0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
white	Metal sandgrey	Plastic white transparent	Plastic	Slow-make switching element	Maintained	45-2234.31N0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
colourless	Metal sandgrey	Plastic colourless transparent	Plastic	Slow-make switching element	Maintained	45-2234.31K0.000	2	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Momentary	45-2231.21F0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Momentary	45-2231.21E0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Momentary	45-2231.21G0.000	1	0,032 kg



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LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Momentary	45-2231.21H0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Metal silver	Plastic blue transparent	Metal	Slow-make switching element	Momentary	45-2231.21J0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
white	Metal silver	Plastic white transparent	Metal	Slow-make switching element	Momentary	45-2231.21N0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Metal	Slow-make switching element	Momentary	45-2231.21K0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Maintained	45-2234.21E0.000	2	0,032 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Maintained	45-2234.21G0.000	2	0,032 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Maintained	45-2234.21H0.000	2	0,032 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
blue	Metal silver	Plastic blue transparent	Metal	Slow-make switching element	Maintained	45-2234.21J0.000	2	0,032 kg
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
white	Metal silver	Plastic white transparent	Metal	Slow-make switching element	Maintained	45-2234.21N0.000	2	0,032 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Maintain, Front dimension Ø 29,5 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Metal	Slow-make switching element	Maintained	45-2234.21K0.000	2	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2231.12E0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2231.12G0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Plastic black	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2231.12H0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2231.12J0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
colourless	Plastic black	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2231.12K0.000	1	0,011 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Metal sandgrey	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2231.32E0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2231.32G0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Metal sandgrey	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2231.32H0.000	1	0,020 kg

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LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Metal sandgrey	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2231.32J0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
white	Metal sandgrey	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2231.32K0.000	1	0,020 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Momentary	45-2231.22E0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Momentary	45-2231.22F0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Momentary	45-2231.22G0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Momentary	45-2231.22H0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Metal silver	Plastic blue transparent	Metal	Slow-make switching element	Momentary	45-2231.22J0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Metal	Slow-make switching element	Momentary	45-2231.22K0.000	1	0,032 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
white	Metal silver	Plastic white transparent	Metal	Slow-make switching element	Momentary	45-2231.22N0.000	1	0,032 kg
 <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29,5 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2231.14J0.000	1	0,011 kg

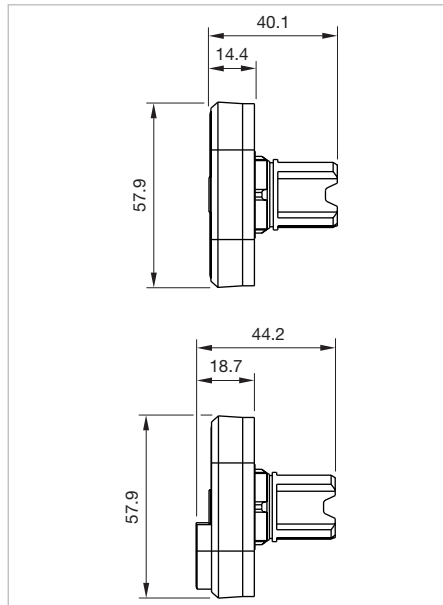
E---	E~--
Wiring diagram 1	Wiring diagram 2

45 Raised design

Double pushbutton, IP66, IP67, IP69K

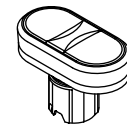


Product can differ from the current configuration.

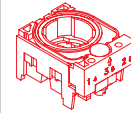


Dimensions [mm]

Equipment consisting of (schematic overview)

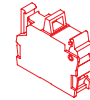


Actuator



Holder

page 138



Switching element

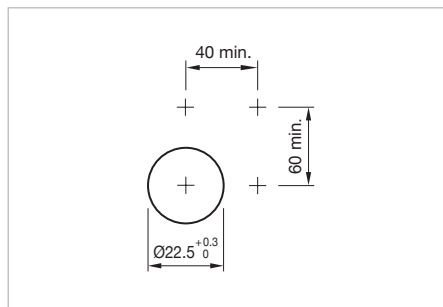
page 140

Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.









Additional Information

- Mounting depth incl. front plate, see chapter «drawings»



Mounting cut-outs [mm]

Front bezel	Lens	Switching system	Switching action	Part No.	Component layout	Wiring diagram	Weight
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Plastic black	Plastic green-red	Slow-make switching element	Momentary	45-2J31.16T0.000	4	1	0,026 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Plastic black	Plastic white-black	Slow-make switching element	Momentary	45-2J31.16V0.000	4	1	0,026 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Plastic black	Plastic green-red	Slow-make switching element	Momentary	45-2J31.15T0.000	4	1	0,026 kg

Front bezel	Lens	Switching system	Switching action	Part No.	Component layout	Wiring diagram	Weight
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Plastic black	Plastic white-black	Slow-make switching element	Momentary	45-2J31.15V0.000	4	1	0,026 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal sandgrey	Plastic green-red	Slow-make switching element	Momentary	45-2J31.36T0.000	4	1	0,043 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal sandgrey	Plastic white-black	Slow-make switching element	Momentary	45-2J31.36V0.000	4	1	0,043 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal sandgrey	Plastic green-red	Slow-make switching element	Momentary	45-2J31.35T0.000	4	1	0,043 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal silver	Plastic green-red	Slow-make switching element	Momentary	45-2J31.26T0.000	4	1	0,068 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal silver	Plastic white-black	Slow-make switching element	Momentary	45-2J31.26V0.000	4	1	0,068 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal silver	Plastic green-red	Slow-make switching element	Momentary	45-2J31.25T0.000	4	1	0,068 kg
	Double pushbutton actuator, momentary, Front dimension 58 mm x 30 mm						
Metal silver	Plastic white-black	Slow-make switching element	Momentary	45-2J31.25V0.000	4	1	0,068 kg



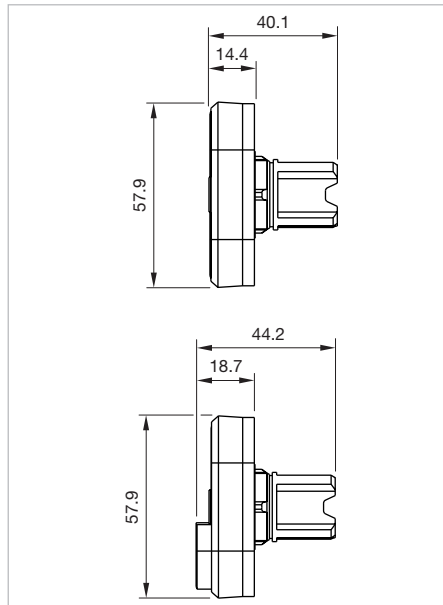
Wiring diagram 1

45 Raised design

Illuminated double pushbutton, IP66, IP67, IP69K

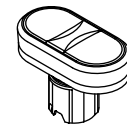


Product can differ from the current configuration.

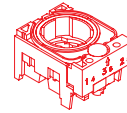


Dimensions [mm]

Equipment consisting of (schematic overview)

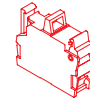


Actuator



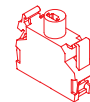
Holder

page 138



Switching element

page 140



Illumination element

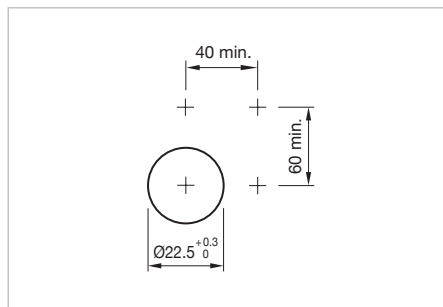
page 144

Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.






Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- With illuminative centre window

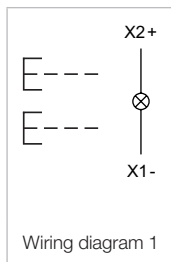


Mounting cut-outs [mm]

Front bezel	Lens	Switching system	Switching action	Illumination	Part No.	Component layout	Wiring diagram	Weight
								
Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm								
Plastic black	Plastic green-red	Slow-make switching element	Momentary	illuminative	45-2K31.16T0.000	4	1	0,025 kg
								
Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm								
Plastic black	Plastic white-black	Slow-make switching element	Momentary	illuminative	45-2K31.16V0.000	4	1	0,025 kg
								
Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm								
Plastic black	Plastic green-red	Slow-make switching element	Momentary	illuminative	45-2K31.15T0.000	4	1	0,025 kg

Front bezel	Lens	Switching system	Switching action	Illumination	Part No.	Component layout	Wiring diagram	Weight
	Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm							
Plastic black	Plastic white-black	Slow-make switching element	Momentary	illuminative	45-2K31.15V0.000	4	1	0,025 kg
	Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm							
Metal sandgrey	Plastic green-red	Slow-make switching element	Momentary	illuminative	45-2K31.36T0.000	4	1	0,043 kg
	Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm							
Metal sandgrey	Plastic white-black	Slow-make switching element	Momentary	illuminative	45-2K31.36V0.000	4	1	0,043 kg
	Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm							
Metal sandgrey	Plastic green-red	Slow-make switching element	Momentary	illuminative	45-2K31.35T0.000	4	1	0,043 kg
	Illuminated double pushbutton actuator, Momentary, Front dimension 58 mm x 30 mm							
Metal sandgrey	Plastic white-black	Slow-make switching element	Momentary	illuminative	45-2K31.35V0.000	4	1	0,043 kg

The component layouts you will find from page 156

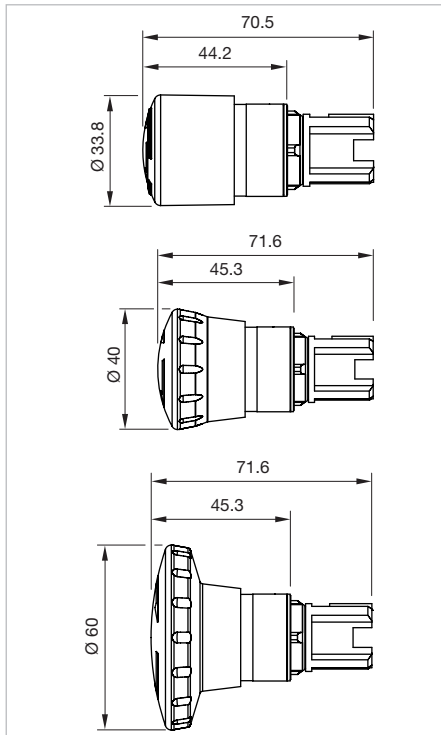


45 Raised design

Emergency-stop switch foolproof, EN IEC 60947-5-5, IP66, IP67, IP69K

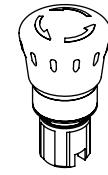


Product can differ from the current configuration.

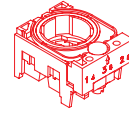


Dimensions [mm]

Equipment consisting of (schematic overview)

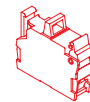


Actuator



Holder

page 138



Switching element

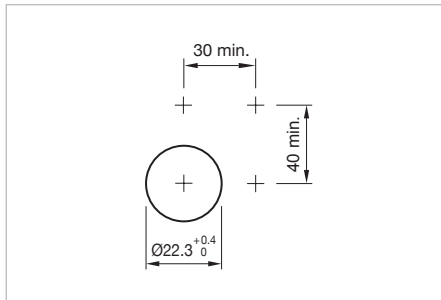
page 140

Each Part Number listed below includes all the black components shown in the 3D-drawing.



To obtain a complete unit, please select the red components from the pages shown.






Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- The standard lock: RONIS, T254
- Two keys are supplied with each key lock switch



Mounting cut-outs [mm]

Product attribute	Front bezel	Lens	Switching action	Part No.	Wiring diagram	Weight
						
Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 34 mm						
Twist to unlock clockwise	Plastic black	Plastic red	Maintained	45-2C36.1820.000	1	0,046 kg
						
Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm						
Twist to unlock clockwise	Plastic black	Plastic red	Maintained	45-2C36.1920.000	1	0,046 kg

Product attribute	Front bezel	Lens	Switching action	Part No.	Wiring diagram	Weight
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Pull release	Plastic black	Plastic red	Maintained	45-2C37.1920.000	1	0,046 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 60 mm</p>						
Twist to unlock clockwise	Plastic black	Plastic red	Maintained	45-2C36.1A20.000	1	0,056 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Twist to unlock anti-clockwise	Plastic black	Plastic red	Maintained	45-2C35.1920.110	1	0,083 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 34 mm</p>						
Twist to unlock clockwise	Metal silver	Plastic red	Maintained	45-2C36.2820.000	1	0,056 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Twist to unlock clockwise	Metal silver	Plastic red	Maintained	45-2C36.2920.000	1	0,046 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Twist to unlock anti-clockwise	Metal silver	Plastic red	Maintained	45-2C35.2920.110	1	0,083 kg



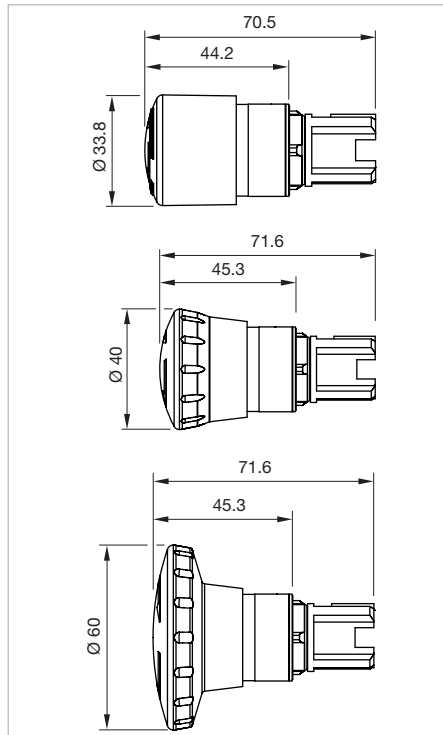
Wiring diagram 1

45 Raised design

Emergency-stop switch, illuminated, foolproof EN IEC 60947-5-5, IP66, IP67, IP69K

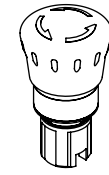


Product can differ from the current configuration.

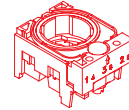


Dimensions [mm]

Equipment consisting of (schematic overview)

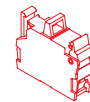


Actuator



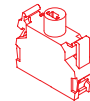
Holder

page 138



Switching element

page 140



Illumination element

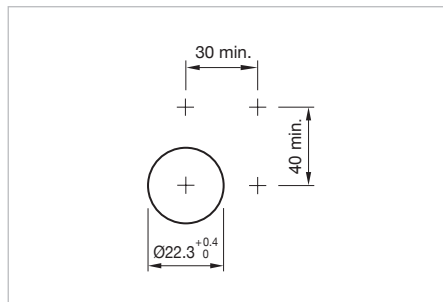
page 144

Each Part Number listed below includes all the black components shown in the 3D-drawing.



To obtain a complete unit, please select the red components from the pages shown.





Additional Information

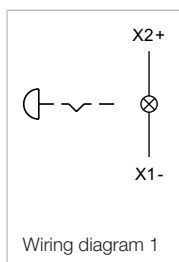
- Mounting depth incl. front plate, see chapter «drawings»
- The standard lock: RONIS, T254
- Two keys are supplied with each key lock switch



Mounting cut-outs [mm]

Product attribute	Front bezel	Lens	Switching action	Part No.	Wiring diagram	Weight
	Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 34 mm					
Twist to unlock clockwise, illuminable	Plastic black	Plastic red	Maintained	45-2D36.1820.000	1	0,046 kg
	Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 34 mm					
Twist to unlock clockwise, illuminable	Metal silver	Plastic red	Maintained	45-2D36.2820.000	1	0,046 kg

Product attribute	Front bezel	Lens	Switching action	Part No.	Wiring diagram	Weight
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Twist to unlock clockwise, illuminable	Plastic black	Plastic red	Maintained	45-2D36.1920.000	1	0,046 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 60 mm</p>						
Twist to unlock clockwise, illuminable	Plastic black	Plastic red	Maintained	45-2D36.1A20.000	1	0,053 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm</p>						
Twist to unlock clockwise, illuminable	Metal silver	Plastic red	Maintained	45-2D36.2920.000	1	0,046 kg
 <p>Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 60 mm</p>						
Twist to unlock clockwise, illuminable	Metal silver	Plastic red	Maintained	45-2D36.2A20.000	1	0,053 kg

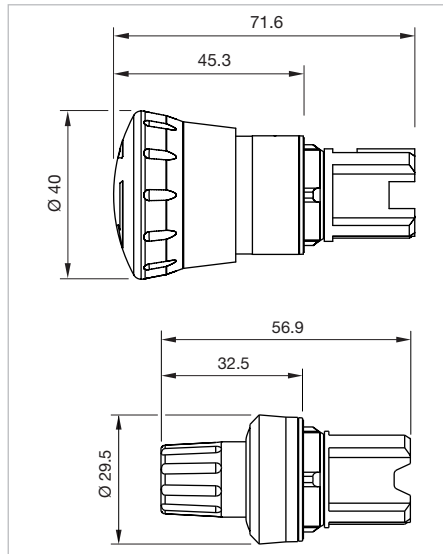


45 Raised design

Stop switch actuator, foolproof, IP66, IP67, IP69K

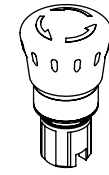


Product can differ from the current configuration.

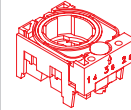


Dimensions [mm]

Equipment consisting of (schematic overview)

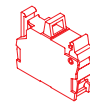


Actuator



Holder

page 138



Switching element

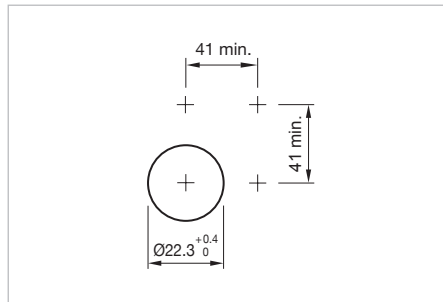
page 140

Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.



Additional Information

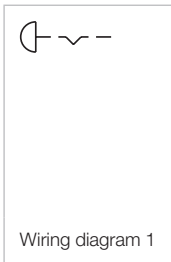
- Mounting depth incl. front plate, see chapter «drawings»



Mounting cut-outs [mm]

Product attribute	Front bezel	Lens	Switching action	Lever	Part No.	Wiring diagram	Weight
	Stop switch actuator, foolproof, Front dimension Ø 40 mm						
Twist to unlock clockwise	Plastic black	Plastic black	Maintained	–	45-2736.1910.000	1	0,036 kg
	Stop switch actuator, foolproof, Front dimension Ø 40 mm						
Twist to unlock clockwise	Plastic black	Plastic blue	Maintained	–	45-2736.1960.000	1	0,046 kg
	Stop switch actuator, foolproof, Front dimension Ø 40 mm						
Twist to unlock clockwise	Metal silver	Plastic black	Maintained	–	45-2C36.2910.000	1	0,036 kg

Product attribute	Front bezel	Lens	Switching action	Lever	Part No.	Wiring diagram	Weight
 <p>Stop switch actuator, foolproof, Front dimension Ø 29.5 mm</p>							
twist to release, can be latched after pressing by rotating to the right	Plastic black	–	Maintained	Plastic black	45-2729.1010.000	1	0,018 kg
 <p>Stop switch actuator, foolproof, Front dimension Ø 29.5 mm</p>							
twist to release, can be latched after pressing by rotating to the right	Plastic black	–	Maintained	Plastic red	45-2729.1020.000	1	0,018 kg

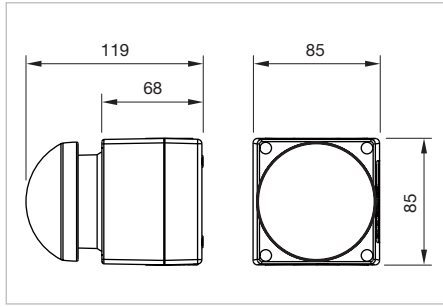


45 Raised design

Palm pushbutton, IP66, IP67, IP69K

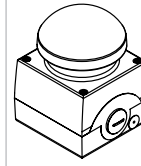


Product can differ from the current configuration.

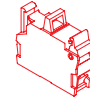


Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator

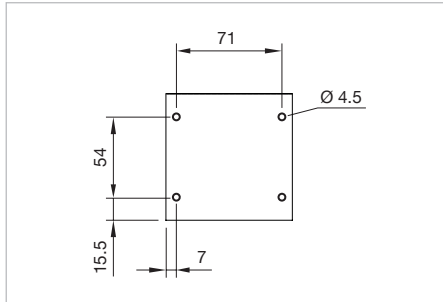


Switching element

page 143

Additional Information





- Mounting depth incl. front plate, see chapter «drawings»



Mounting cut-outs [mm]

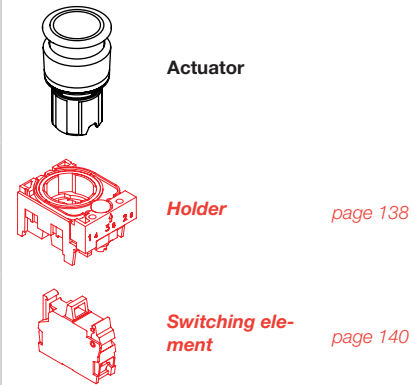
Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Lens	Housing material	Switching system	Switching action	Part No.	Weight
	Palm pushbutton, Front dimension 85 x 85 mm				
Plastic black	Metal	Slow-make switching element	Momentary	45-481.2810	0,642 kg
	Palm pushbutton, Front dimension 85 x 85 mm				
Plastic red	Metal	Slow-make switching element	Maintained	45-482.2810	0,642 kg
	Palm pushbutton, Front dimension 85 x 85 mm				
Plastic black	Plastic	Slow-make switching element	Momentary	45-481.1810	0,390 kg
	Palm pushbutton, Front dimension 85 x 85 mm				
Plastic red	Plastic	Slow-make switching element	Maintained	45-482.1810	0,390 kg

Mushroom-head pushbutton Ø 30 mm, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

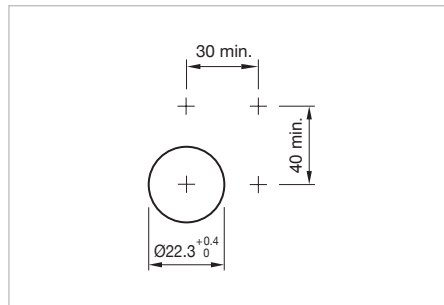
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Product can differ from the current configuration.





Mounting cut-outs [mm]






Additional Information

- Mounting depth incl. front plate, see chapter «drawings»

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Maintained	45-2530.1810.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Maintained	45-2530.1820.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Maintained	45-2530.1840.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2531.1810.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2531.1820.000	1	0,020 kg

45 Raised design

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2531.1840.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2531.1850.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Maintained	45-2530.3810.000	2	0,034 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Maintained	45-2530.3820.000	2	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Momentary	45-2531.3810.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Metal sandgrey	Plastic red	Plastic	Slow-make switching element	Momentary	45-2531.3820.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Metal sandgrey	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2531.3840.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm						
Metal sandgrey	Plastic green	Plastic	Slow-make switching element	Momentary	45-2531.3850.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Maintained	45-2530.2810.000	2	0,052 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>							
Metal silver	Plastic red	Metal	Slow-make switching element	Maintained	45-2530.2820.000	2	0,052 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>							
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2531.2810.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>							
Metal silver	Plastic red	Metal	Slow-make switching element	Momentary	45-2531.2820.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>							
Metal silver	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2531.2840.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>							
Metal silver	Plastic green	Metal	Slow-make switching element	Momentary	45-2531.2850.000	1	0,052 kg

E---	E~--
Wiring diagram 1	Wiring diagram 2

45 Raised design

Mushroom-head pushbutton Ø 40 mm, IP66, IP67, IP69K



Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator



Holder

page 138



Switching element

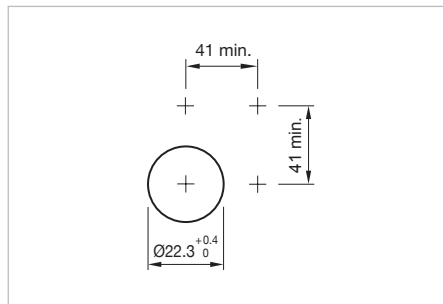
page 140

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.










Additional Information

- Mounting depth incl. front plate, see chapter «drawings»















Mounting cut-outs [mm]





Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Maintained	45-2530.1910.000	2	0,022 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Maintained	45-2530.1920.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Maintained	45-2530.1940.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Metal silver	Plastic green	Plastic	Slow-make switching element	Maintained	45-2530.1950.000	2	0,020 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2531.1910.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Momentary	45-2531.1920.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Plastic black	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2531.1940.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Plastic black	Plastic green	Plastic	Slow-make switching element	Momentary	45-2531.1950.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Maintained	45-2530.3910.000	2	0,034 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Plastic black	Plastic red	Plastic	Slow-make switching element	Maintained	45-2530.3920.000	2	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal sandgrey	Plastic black	Plastic	Slow-make switching element	Momentary	45-2531.3910.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic red	Plastic	Slow-make switching element	Momentary	45-2531.3920.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2531.3940.000	1	0,034 kg

45 Raised design

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic green	Plastic	Slow-make switching element	Momentary	45-2531.3950.000	1	0,034 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Maintained	45-2530.2910.000	2	0,052 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Maintained	45-2530.2920.000	2	0,052 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm						
Metal sandgrey	Plastic yellow	Metal	Slow-make switching element	Maintained	45-2530.2940.000	2	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2531.2910.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic red	Metal	Slow-make switching element	Momentary	45-2531.2920.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2531.2940.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm						
Metal silver	Plastic green	Metal	Slow-make switching element	Momentary	45-2531.2950.000	1	0,052 kg
	Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary / Maintain	45-2532.2910.000	3	0,052 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm						
Plastic black	Plastic red	Metal	Slow-make switching element	Momentary / Maintain	45-2532.2920.000	3	0,052 kg
	Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm						
Plastic black	Plastic black	Metal	Slow-make switching element	Momentary / Momentary	45-2533.2910.000	4	0,052 kg
	Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm						
Plastic black	Plastic red	Metal	Slow-make switching element	Momentary / Momentary	45-2533.2920.000	4	0,052 kg

			
Wiring diagram 1	Wiring diagram 2	Wiring diagram 3	Wiring diagram 4

45 Raised design

Mushroom-head pushbutton Ø 60 mm, IP66, IP67, IP69K

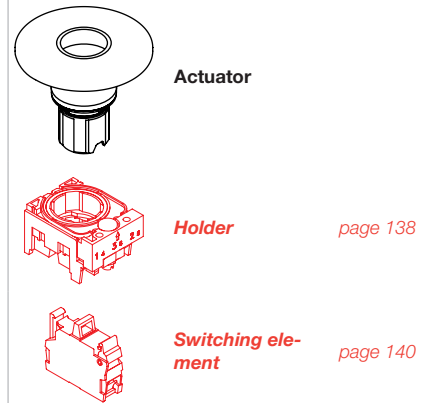


Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)

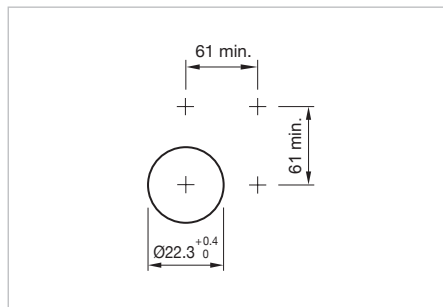


Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.










Additional Information

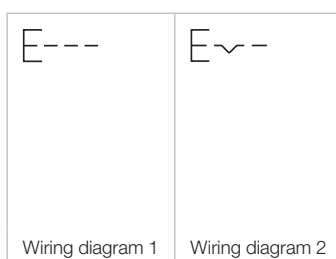
- Mounting depth incl. front plate, see chapter «drawings»



Mounting cut-outs [mm]

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm						
Metal silver	Plastic black	Plastic	Slow-make switching element	Maintained	45-2530.1A10.000	2	0,022 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm						
Metal silver	Plastic red	Plastic	Slow-make switching element	Maintained	45-2530.1A20.000	2	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Plastic black	Plastic black	Plastic	Slow-make switching element	Momentary	45-2531.1A10.000	1	0,020 kg

Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal silver	Plastic red	Plastic	Slow-make switching element	Momentary	45-2531.1A20.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal silver	Plastic yellow	Plastic	Slow-make switching element	Momentary	45-2531.1A40.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal silver	Plastic green	Plastic	Slow-make switching element	Momentary	45-2531.1A50.000	1	0,020 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm						
Metal sandgrey	Plastic black	Metal	Slow-make switching element	Maintained	45-2530.2A10.000	2	0,052 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm						
Metal sandgrey	Plastic red	Metal	Slow-make switching element	Maintained	45-2530.2A20.000	2	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal silver	Plastic black	Metal	Slow-make switching element	Momentary	45-2531.2A10.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal sandgrey	Plastic red	Metal	Slow-make switching element	Momentary	45-2531.2A20.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal sandgrey	Plastic yellow	Metal	Slow-make switching element	Momentary	45-2531.2A40.000	1	0,052 kg
	Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm						
Metal sandgrey	Plastic green	Metal	Slow-make switching element	Momentary	45-2531.2A50.000	1	0,052 kg



45 Raised design

Mushroom-head pushbutton Ø 30 mm, illuminated, IP66, IP67, IP69K



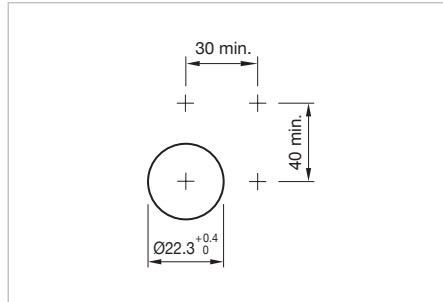
Product can differ from the current configuration.



Dimensions [mm]

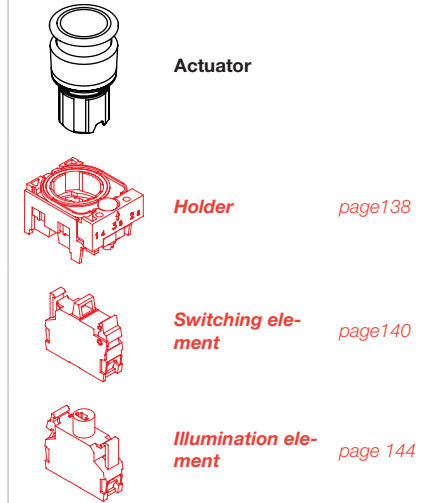
Additional Information

- Mounting depth incl. front plate, see chapter «drawings»








Mounting cut-outs [mm]










Equipment consisting of (schematic overview)












Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.

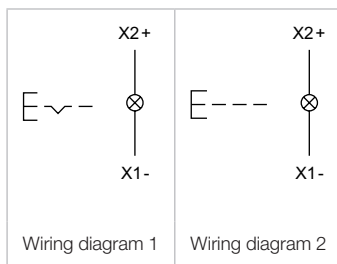
LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2630.18E0.000	1	0,027 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2630.18G0.000	1	0,027 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
green	Plastic black	Plastic green transparent	Plastic	Slow-make switching element	Maintained	45-2630.18H0.000	1	0,027 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Maintained	45-2630.18J0.000	1	0,027 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
colourless	Plastic black	Plastic colourless transparent	Plastic	Slow-make switching element	Maintained	45-2630.18K0.000	1	0,027 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2631.18E0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2631.18G0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
green	Plastic black	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2631.18H0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
blue	Plastic black	Plastic blue transparent	Plastic	Slow-make switching element	Momentary	45-2631.18J0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
colourless	Plastic black	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2631.18K0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
white	Plastic black	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2631.18N0.000	2	0,033 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
red	Metal sandgrey	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2630.38E0.000	1	0,034 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2630.38G0.000	1	0,034 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2631.38G0.000	2	0,026 kg

45 Raised design

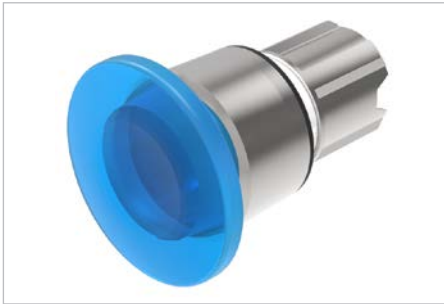
LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
green	Metal sandgrey	Plastic red transparent	Plastic	Slow-make switching element	Momentary	45-2631.38H0.000	2	0,026 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
colourless	Metal sandgrey	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2631.38K0.000	2	0,026 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
white	Metal sandgrey	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2631.38N0.000	2	0,026 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Maintained	45-2630.28F0.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Maintained	45-2630.28E0.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Maintained	45-2630.28G0.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Maintained	45-2630.28H0.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
blue	Metal silver	Plastic blue transparent	Metal	Slow-make switching element	Maintained	45-2630.28J0.000	1	0,052 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Metal	Slow-make switching element	Maintained	45-2630.28K0.000	1	0,052 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Momentary	45-2631.28G0.000	2	0,041 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Momentary	45-2631.28H0.000	2	0,041 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p>								
white	Metal silver	Plastic white transparent	Metal	Slow-make switching element	Momentary	45-2631.28N0.000	2	0,041 kg

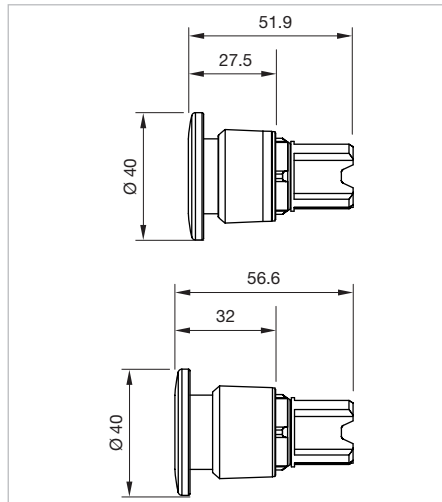


45 Raised design

Mushroom-head pushbutton Ø 40 mm, illuminated, IP66, IP67, IP69K

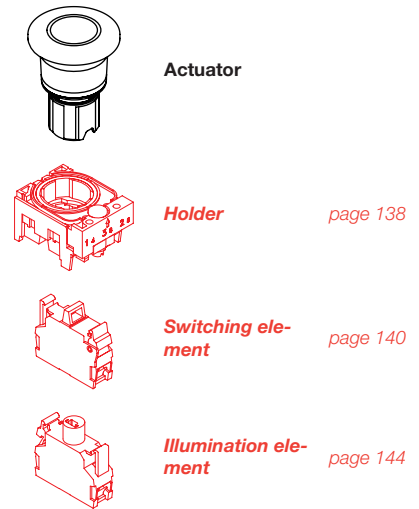


Product can differ from the current configuration.



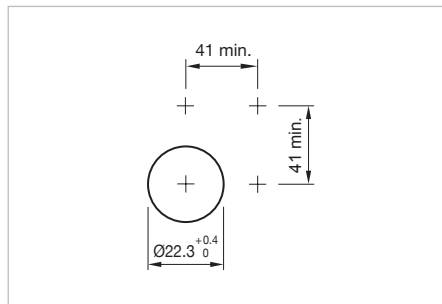
Dimensions [mm]

Equipment consisting of (schematic overview)



Additional Information





- Mounting depth incl. front plate, see chapter «drawings»












Mounting cut-outs [mm]










Each Part Number listed below includes all the black components shown in the 3D-drawing.








To obtain a complete unit, please select the red components from the pages shown.

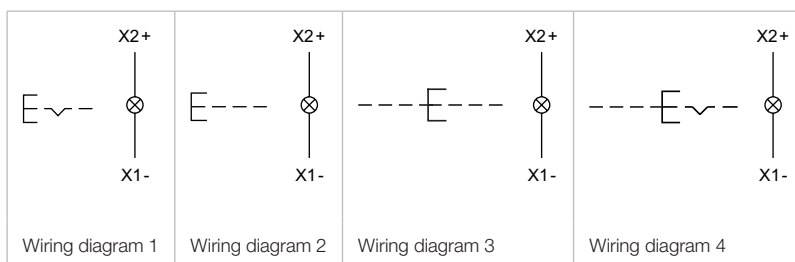
LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2630.19E0.000	1	0,028 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2630.19G0.000	1	0,028 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
green	Metal silver	Plastic green transparent	Plastic	Slow-make switching element	Maintained	45-2630.19H0.000	1	0,028 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
blue	Metal silver	Plastic blue transparent	Plastic	Slow-make switching element	Maintained	45-2630.19J0.000	1	0,028 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Plastic	Slow-make switching element	Maintained	45-2630.19K0.000	1	0,028 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2631.19G0.000	2	0,019 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
green	Metal silver	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2631.19H0.000	2	0,019 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2631.19K0.000	2	0,019 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
white	Metal silver	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2631.19N0.000	2	0,019 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
red	Plastic black	Plastic red transparent	Plastic	Slow-make switching element	Maintained	45-2630.39E0.000	1	0,035 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
yellow	Plastic black	Plastic yellow transparent	Plastic	Slow-make switching element	Maintained	45-2630.39G0.000	1	0,035 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Plastic	Slow-make switching element	Momentary	45-2631.39G0.000	2	0,028 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
green	Metal silver	Plastic green transparent	Plastic	Slow-make switching element	Momentary	45-2631.39H0.000	2	0,028 kg

45 Raised design

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Plastic	Slow-make switching element	Momentary	45-2631.39K0.000	2	0,028 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
white	Metal silver	Plastic white transparent	Plastic	Slow-make switching element	Momentary	45-2631.39N0.000	2	0,028 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Maintained	45-2630.29E0.000	1	0,035 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Maintained	45-2630.29F0.000	1	0,053 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Maintained	45-2630.29G0.000	1	0,053 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Maintained	45-2630.29H0.000	1	0,053 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
blue	Metal silver	Plastic blue transparent	Metal	Slow-make switching element	Maintained	45-2630.29J0.000	1	0,053 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm</p>								
colourless	Metal silver	Plastic colourless transparent	Metal	Slow-make switching element	Maintained	45-2630.29K0.000	1	0,053 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Momentary	45-2631.29F0.000	2	0,042 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Momentary	45-2631.29G0.000	2	0,042 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
green	Metal silver	Plastic green transparent	Metal	Slow-make switching element	Momentary	45-2631.29H0.000	2	0,042 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm</p>								
white	Metal silver	Plastic white transparent	Metal	Slow-make switching element	Momentary	45-2631.29N0.000	2	0,042 kg
 <p>Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm</p>								
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element		45-2632.29E0.000	3	0,051 kg
 <p>Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm</p>								
green	Plastic black	Plastic green transparent	Metal	Slow-make switching element		45-2632.29H0.000	3	0,051 kg
 <p>Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm</p>								
red	Plastic black	Plastic red transparent	Metal	Slow-make switching element		45-2633.29E0.000	4	0,051 kg
 <p>Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm</p>								
white	Plastic black	Plastic white transparent	Metal	Slow-make switching element		45-2633.29N0.000	4	0,051 kg



45 Raised design

Mushroom-head pushbutton Ø 60 mm, illuminated, IP66, IP67, IP69K

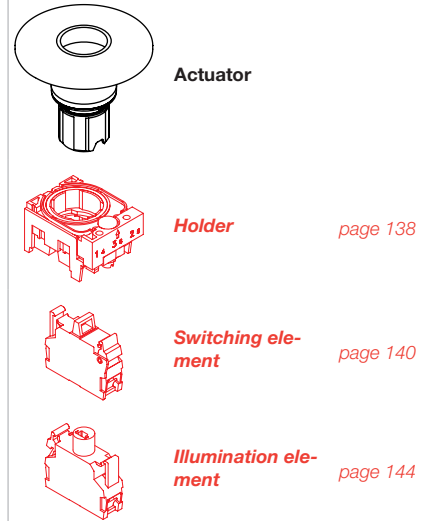


Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)

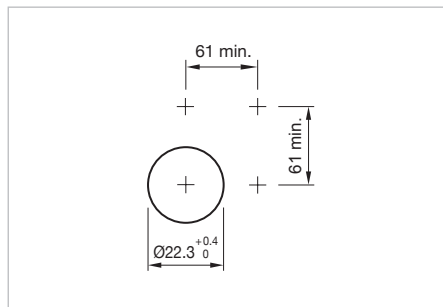


Each Part Number listed below includes all the black components shown in the 3D-drawing.




To obtain a complete unit, please select the red components from the pages shown.







Additional Information

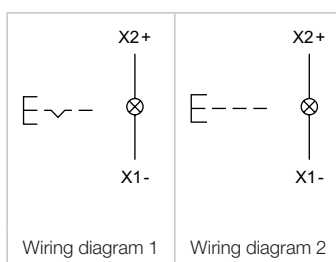
- Mounting depth incl. front plate, see chapter «drawings»



Mounting cut-outs [mm]

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm							
red	Metal silver	Plastic red transparent	Metal	Slow-make switching element	Maintain	45-2630.2AE0.000	1	0,057 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm							
yellow	Metal silver	Plastic yellow transparent	Metal	Slow-make switching element	Maintain	45-2630.2AG0.000	1	0,057 kg
	Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm							
green	Metal sandgrey	Plastic green transparent	Metal	Slow-make switching element	Maintain	45-2630.2AH0.000	1	0,057 kg

LED colour	Front bezel	Lens	Housing material	Switching system	Switching action	Part No.	Wiring diagram	Weight
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm</p>								
blue	Metal sandgrey	Plastic blue transparent	Metal	Slow-make switching element	Maintain	45-2630.2AJ0.000	1	0,057 kg
 <p>Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm</p>								
colourless	Metal sandgrey	Plastic colourless transparent	Metal	Slow-make switching element	Maintain	45-2630.2AK0.000	1	0,057 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm</p>								
amber	Metal silver	Plastic amber transparent	Metal	Slow-make switching element	Momentary	45-2631.2AF0.000	2	0,045 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm</p>								
yellow	Metal sandgrey	Plastic yellow transparent	Metal	Slow-make switching element	Momentary	45-2631.2AG0.000	2	0,045 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm</p>								
green	Metal sandgrey	Plastic green transparent	Metal	Slow-make switching element	Momentary	45-2631.2AH0.000	2	0,045 kg
 <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm</p>								
white	Metal sandgrey	Plastic white transparent	Metal	Slow-make switching element	Momentary	45-2631.2AN0.000	2	0,045 kg



45 Raised design

Keylock switch 2 positions, IP66, IP67, IP69K



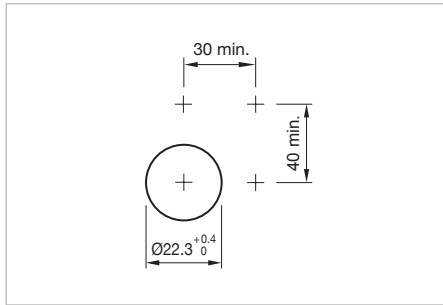
Product can differ from the current configuration.



Dimensions [mm]

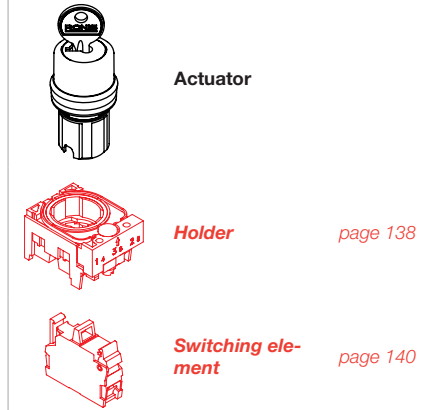
Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- The standard lock: RONIS, T254
- Two keys are supplied with each key lock switch



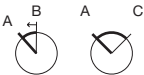
Mounting cut-outs [mm]

Equipment consisting of (schematic overview)






Each Part Number listed below includes all the black components shown in the 3D-drawing.

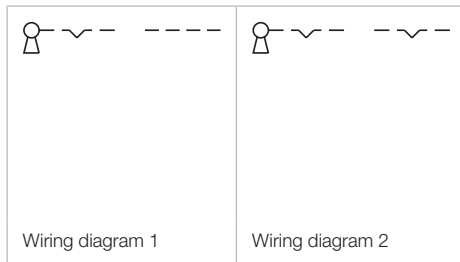
To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Keylock switch actuator 2 positions, Front dimension Ø 29,5 mm</p>						
Plastic black	Plastic	Rest(a) - Momentary	45° right	45-290K.1000.116	1	0,046 kg
		Rest(a) - Maintain	90° right	45-290J.1000.111	2	0,046 kg
		Rest(a) - Maintain(a)	90° right	45-290H.1000.111	2	0,046 kg
		Rest - Maintain(a)	90° right	45-2925.1000.111	2	0,046 kg
 <p>Keylock switch actuator 2 positions, Front dimension Ø 29,5 mm</p>						
Metal sandgrey	Plastic	Rest(a) - Momentary	45° right	45-290K.3000.116	1	0,061 kg
		Rest(a) - Maintain	90° right	45-290J.3000.111	2	0,061 kg
		Rest(a) - Maintain(a)	90° right	45-290H.3000.111	2	0,061 kg
		Rest - Maintain(a)	90° right	45-2925.3000.111	2	0,061 kg

Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Keylock switch actuator 2 positions, Front dimension Ø 29,5 mm</p>						
Metal silver	Metal	Rest(a) - Momentary	45° right	45-290K.2000.116	1	0,080 kg
		Rest(a) - Maintain	90° right	45-290J.2000.111	2	0,080 kg
		Rest(a) - Maintain(a)	90° right	45-290H.2000.111	2	0,080 kg
		Rest - Maintain(a)	90° right	45-2925.2000.111	2	0,080 kg



45 Raised design

Keylock switch 3 positions, IP66, IP67, IP69K



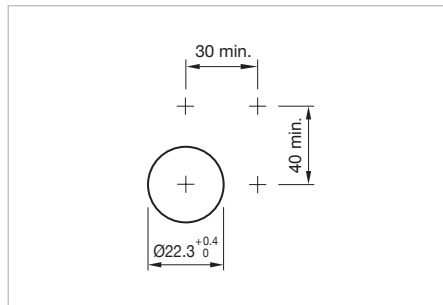
Product can differ from the current configuration.



Dimensions [mm]

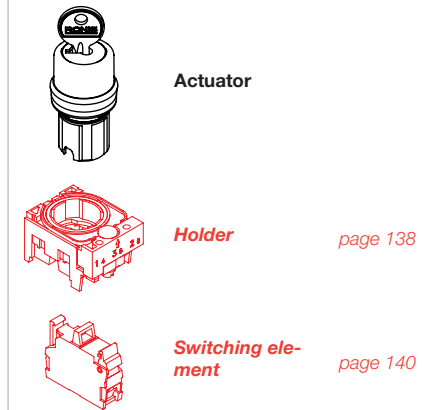
Additional Information

- Mounting depth incl. front plate, see chapter «drawings»
- The standard lock: RONIS, T254
- Two keys are supplied with each key lock switch



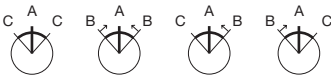
Mounting cut-outs [mm]

Equipment consisting of (schematic overview)




Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Switching positions (A = Rest, B = Momentary, C = Maintained)

Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Keylock switch actuator 3 positions, Front dimension Ø 29,5 mm</p>					
Plastic black	Maintain - Rest(a) - Maintain	45° left+right	45-2924.1000.113	1	0,060 kg
	Maintain(a) - Rest(a) - Maintain(a)	45° left+right	45-290F.1000.113	1	0,060 kg
	Maintain(a) - Rest - Maintain	45° left+right	45-290D.1000.113	1	0,060 kg
	Maintain - Rest - Maintain(a)	45° left+right	45-2917.1000.113	1	0,060 kg
	Maintain(a) - Rest - Maintain(a)	45° left+right	45-290C.1000.113	1	0,060 kg
	Maintain(a) - Rest(a) - Maintain	45° left+right	45-290G.1000.113	1	0,060 kg
	Momentary - Rest(a) - Momentary	45° left+right	45-290Z.1000.113	2	0,060 kg
	Maintain - Rest(a) - Momentary	45° left+right	45-2922.1000.113	3	0,060 kg
	Maintain(a) - Rest - Momentary	45° left+right	45-290A.1000.113	3	0,060 kg
	Maintain(a) - Rest(a) - Momentary	45° left+right	45-290E.1000.113	3	0,060 kg
	Momentary - Rest(a) - Maintain	45° left+right	45-2911.1000.113	4	0,060 kg
	Momentary - Rest - Maintain(a)	45° left+right	45-290W.1000.113	4	0,060 kg
	Momentary - Rest(a) - Maintain(a)	45° left+right	45-2910.1000.113	4	0,060 kg

Front bezel	Switching action	Switching angle	Part No.	Wiring diagram	Weight
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Keylock switch actuator 3 positions, Front dimension Ø 29,5 mm

Metal sandgrey	Maintain - Rest(a) - Maintain	45° left+right	45-2924.3000.113	1	0,061 kg
	Maintain(a) - Rest(a) - Maintain(a)	45° left+right	45-290F.3000.113	1	0,061 kg
	Maintain(a) - Rest - Maintain	45° left+right	45-290D.3000.113	1	0,061 kg
	Maintain - Rest - Maintain(a)	45° left+right	45-2917.3000.113	1	0,061 kg
	Maintain(a) - Rest - Maintain(a)	45° left+right	45-290C.3000.113	1	0,061 kg
	Maintain(a) - Rest(a) - Maintain	45° left+right	45-290G.3000.113	1	0,061 kg
	Momentary - Rest(a) - Momentary	45° left+right	45-290Z.3000.113	2	0,061 kg
	Maintain - Rest(a) - Momentary	45° left+right	45-2922.3000.113	3	0,061 kg
	Momentary - Rest(a) - Maintain	45° left+right	45-2911.3000.113	4	0,061 kg



Keylock switch actuator 3 positions, Front dimension Ø 29,5 mm

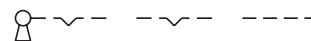
Metal silver	Maintain - Rest(a) - Maintain	45° left+right	45-2924.2000.113	1	0,080 kg
	Maintain(a) - Rest(a) - Maintain(a)	45° left+right	45-290F.2000.113	1	0,080 kg
	Maintain(a) - Rest - Maintain	45° left+right	45-290D.2000.113	1	0,080 kg
	Maintain - Rest - Maintain(a)	45° left+right	45-2917.2000.113	1	0,080 kg
	Maintain(a) - Rest - Maintain(a)	45° left+right	45-290C.2000.113	1	0,080 kg
	Maintain(a) - Rest(a) - Maintain	45° left+right	45-290G.2000.113	1	0,080 kg
	Momentary - Rest(a) - Momentary	45° left+right	45-290Z.2000.113	2	0,080 kg
	Maintain - Rest(a) - Momentary	45° left+right	45-2922.2000.113	3	0,080 kg
	Maintain(a) - Rest - Momentary	45° left+right	45-290A.2000.113	3	0,080 kg
	Maintain(a) - Rest(a) - Momentary	45° left+right	45-290E.2000.113	3	0,080 kg
	Momentary - Rest(a) - Maintain	45° left+right	45-2911.2000.113	4	0,080 kg
	Momentary - Rest(a) - Maintain(a)	45° left+right	45-2910.2000.113	4	0,080 kg



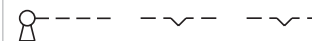
Wiring diagram 1



Wiring diagram 2



Wiring diagram 3



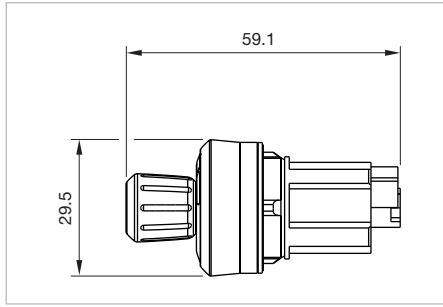
Wiring diagram 4

45 Raised design

ID keylock switch, IP65



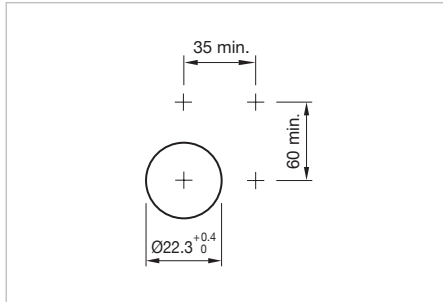
Product can differ from the current configuration.



Dimensions [mm]

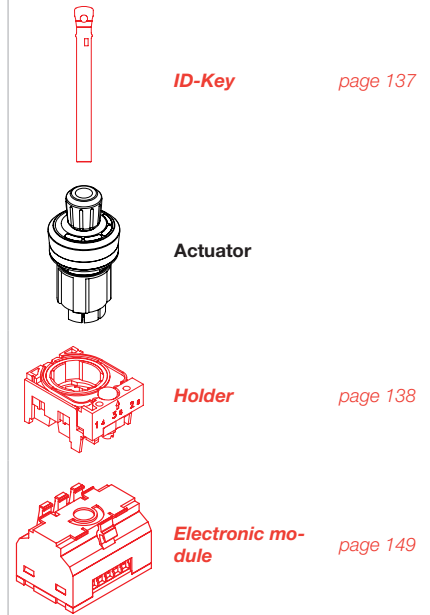
Additional Information

- Mounting depth incl. front plate, see chapter «drawings»





Mounting cut-outs [mm]

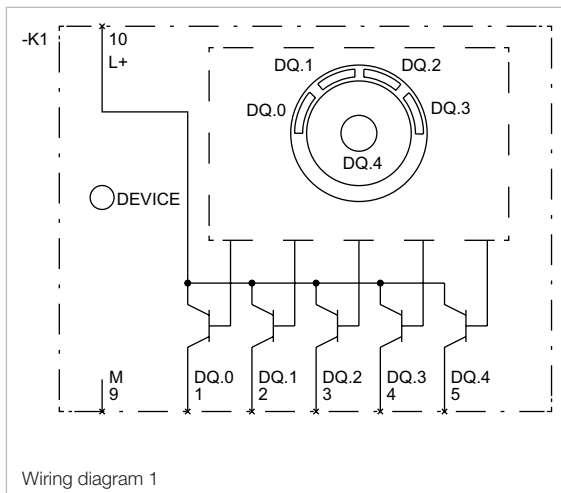
Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

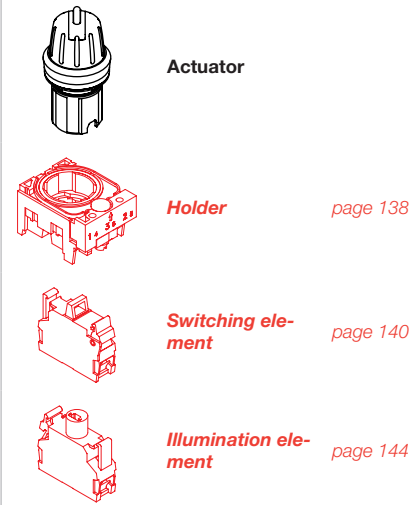
To obtain a complete unit, please select the red components from the pages shown.

Front ring	Switching action	Key remove	Part No.	Wiring diagram	Weight
	ID keylock switch, Front dimension Ø 29.5 mm				
Plastic black	Maintain - Maintain - Maintain - Maintain	in all 4 positions possible	45-2S00.1001.404	1	0.060 kg
	ID keylock switch, Front dimension Ø 29.5 mm				
Metal sandgrey	Maintain - Maintain - Maintain - Maintain	in all 4 positions possible	45-2S00.3001.404	1	0.060 kg



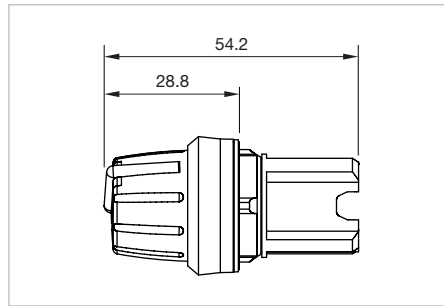
Selector switch actuator 2 positions round lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)

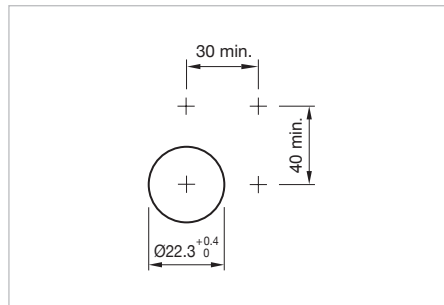


Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Mounting cut-outs [mm]



Product can differ from the current configuration.

Additional Information

- Mounting depth incl. front plate, see chapter «drawings»

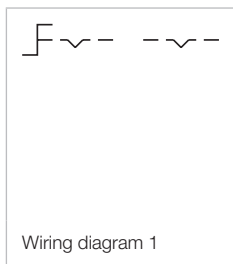
A C



Switching positions (A = Rest, B = Momentary, C = Maintained)

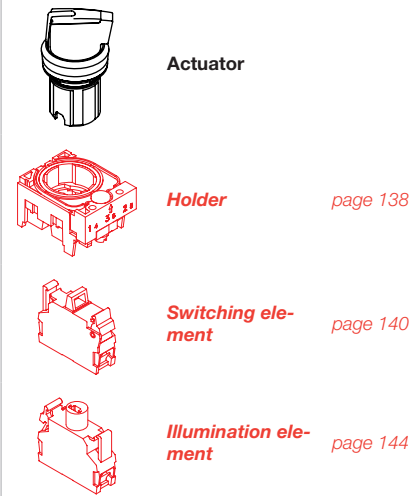
Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, round lever, Front dimension Ø 29,5 mm						
Plastic red round	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1E20.001	1	0,023 kg
	Selector switch actuator 2 positions, round lever, Front dimension Ø 29,5 mm						
Plastic white round	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1E90.001	1	0,023 kg
	Selector switch actuator 2 positions, round lever, Front dimension Ø 29,5 mm						
Plastic red round	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3E20.001	1	0,023 kg
	Selector switch actuator 2 positions, round lever, Front dimension Ø 29,5 mm						
Plastic white round	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3E90.001	1	0,023 kg

45 Raised design



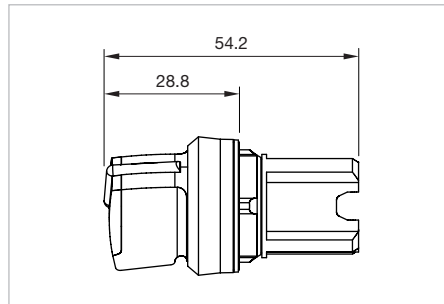
Selector switch actuator 2 positions short lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

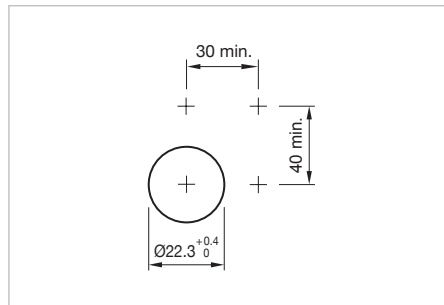
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



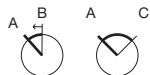
Product can differ from the current configuration.







Mounting cut-outs [mm]

Additional Information


- Mounting depth incl. front plate, see chapter «drawings»
- External diameter of the short lever 32.3 mm












Switching positions (A = Rest, B = Momentary, C = Maintained)








Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Rest - Maintain	45° right	45-2844.1C20.006	1	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Rest - Maintain	45° right	45-2844.1C40.006	1	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Rest - Maintain	45° right	45-2844.1C50.006	1	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Rest - Maintain	45° right	45-2844.1C60.006	1	0,022 kg

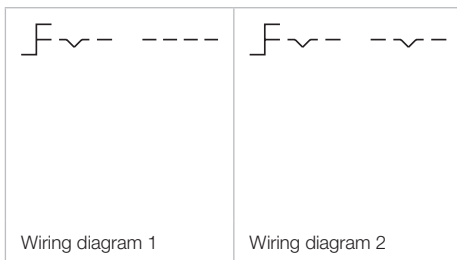
45 Raised design

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Rest - Maintain	45° right	45-2844.1C90.006	1	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Rest - Maintain	45° right	45-2844.3C20.006	1	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Rest - Maintain	45° right	45-2844.3C40.006	1	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal sandgrey	Plastic	Rest - Maintain	45° right	45-2844.3C50.006	1	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal sandgrey	Plastic	Rest - Maintain	45° right	45-2844.3C60.006	1	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal sandgrey	Plastic	Rest - Maintain	45° right	45-2844.3C90.006	1	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2C20.006	1	0,044 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2C40.006	1	0,044 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2C50.006	1	0,044 kg

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2C60.006	1	0,044 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2C90.006	1	0,044 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1C20.001	2	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1C40.001	2	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1C50.001	2	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1C60.001	2	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1C90.001	2	0,022 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3C20.001	2	0,029 kg
	Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3C40.001	2	0,029 kg

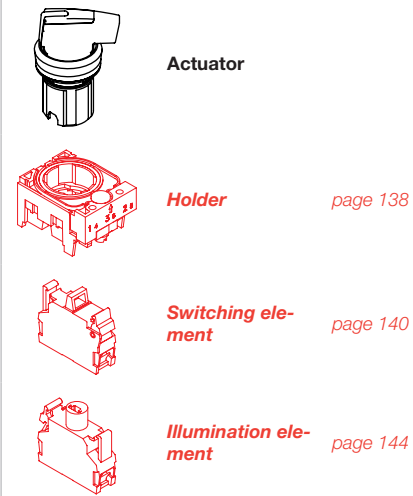
45 Raised design

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic green short	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3C50.001	2	0,029 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic blue short	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3C60.001	2	0,029 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic white short	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3C90.001	2	0,029 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic red short	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2C20.001	2	0,044 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic yellow short	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2C30.001	2	0,044 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic green short	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2C50.001	2	0,044 kg
 <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 29,5 mm</p>							
Plastic white short	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2C90.001	2	0,044 kg



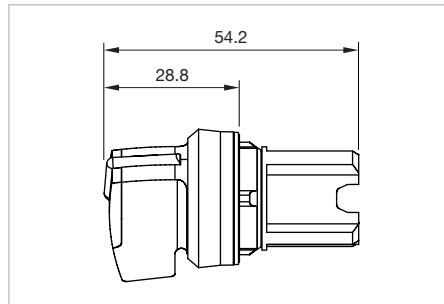
Selector switch 2 positions long lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

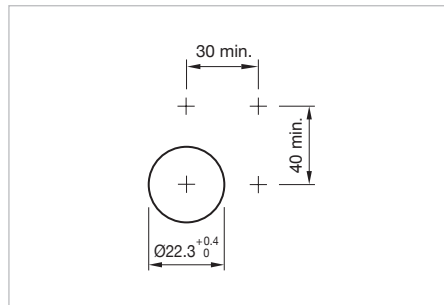
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



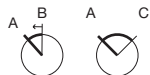
Product can differ from the current configuration.



Mounting cut-outs [mm]

Additional Information










- Mounting depth incl. front plate, see chapter «drawings»
- External diameter of the long lever 44.8 mm

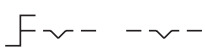


Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1D20.001	1	0,022 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Plastic black	Plastic	Rest - Maintain	90° right	45-2828.1D90.001	1	0,022 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3D20.001	1	0,029 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal sandgrey	Plastic	Rest - Maintain	90° right	45-2828.3D90.001	1	0,029 kg

45 Raised design

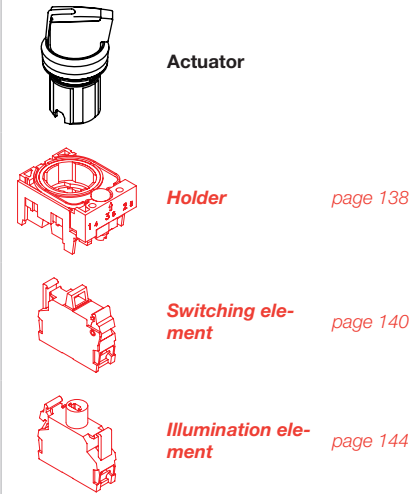
Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2D20.001	1	0,022 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic yellow long	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2D40.001	1	0,052 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic green long	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2D50.001	1	0,052 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic blue long	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2D60.001	1	0,052 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Rest - Maintain	90° right	45-2828.2D90.001	1	0,052 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic yellow long	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2D40.006	2	0,044 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic green long	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2D50.006	2	0,044 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic blue long	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2D60.006	2	0,044 kg
	Selector switch actuator 2 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Rest - Maintain	45° right	45-2844.2D90.006	2	0,044 kg



Wiring diagram 1

Selector switch 3 positions short lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

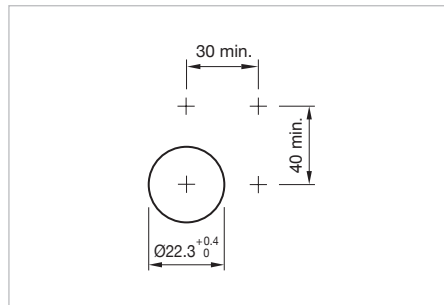
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Product can differ from the current configuration.







Mounting cut-outs [mm]

Additional Information











- Mounting depth incl. front plate, see chapter «drawings»
- External diameter of the short lever 32.3 mm













Switching positions (A = Rest, B = Momentary, C = Maintained)











Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.1C20.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.1C40.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.1C50.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.1C60.003	1	0,022 kg











45 Raised design

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.1C90.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.1C20.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.1C40.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.1C50.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.1C60.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.1C90.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.1C20.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.1C40.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.1C50.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.1C60.003	3	0,022 kg










Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.1C90.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Plastic black	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.1C20.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Plastic black	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.1C40.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Plastic black	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.1C50.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Plastic black	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.1C60.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Plastic black	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.1C90.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.3C20.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.3C40.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal sandgrey	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.3C50.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal sandgrey	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.3C60.003	1	0,022 kg

45 Raised design

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal sandgrey	Plastic	Maintain - Rest - Maintain	45° left+right	45-2819.3C90.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.3C20.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.3C40.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal sandgrey	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.3C50.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal sandgrey	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.3C60.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal sandgrey	Plastic	Momentary - Rest - Momentary	45° left+right	45-280S.3C90.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.3C20.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.3C40.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal sandgrey	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.3C50.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal sandgrey	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.3C60.003	3	0,022 kg

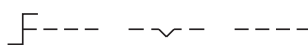
Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal sandgrey	Plastic	Maintain - Rest - Momentary	45° left+right	45-2816.3C90.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal sandgrey	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.3C20.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal sandgrey	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.3C40.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal sandgrey	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.3C50.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal sandgrey	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.3C60.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal sandgrey	Plastic	Momentary - Rest - Maintain	45° left+right	45-280X.3C90.003	4	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2C20.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2C40.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2C50.003	1	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2C90.003	1	0,022 kg

45 Raised design

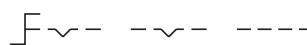
Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C20.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic amber short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C30.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic yellow short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C40.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C50.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic blue short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C60.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2C90.003	2	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic red short	Metal silver	Metal	Maintain - Rest - Momentary	45° left+right	45-2816.2C20.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic green short	Metal silver	Metal	Maintain - Rest - Momentary	45° left+right	45-2816.2C50.003	3	0,022 kg
	Selector switch actuator 3 positions, short lever, Front dimension Ø 29,5 mm						
Plastic white short	Metal silver	Metal	Maintain - Rest - Momentary	45° left+right	45-2816.2C90.003	3	0,022 kg
Plastic white short	Metal silver	Metal	Momentary - Rest - Maintain	45° left+right	45-280X.2C90.003	4	0,022 kg



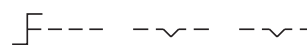
Wiring diagram 1



Wiring diagram 2



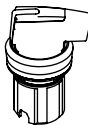
Wiring diagram 3

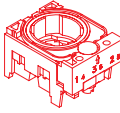


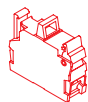
Wiring diagram 4

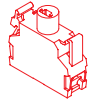
Selector switch 3 positions long lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)

 **Actuator**

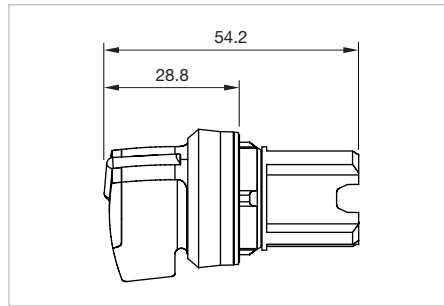
 **Holder** *page 138*

 **Switching element** *page 140*

 **Illumination element** *page 144*

Each Part Number listed below includes all the black components shown in the 3D-drawing.

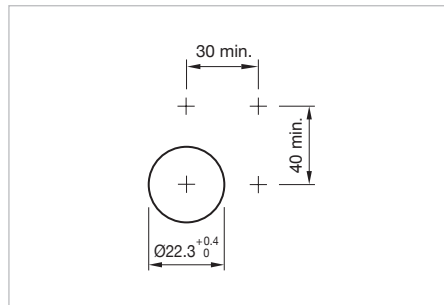
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



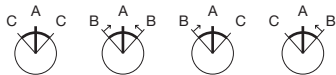
Product can differ from the current configuration.







Mounting cut-outs [mm]

Additional Information







- Mounting depth incl. front plate, see chapter «drawings»
- External diameter of the long lever 44.8 mm







Switching positions (A = Rest, B = Momentary, C = Maintained)

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2D20.003	1	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic green long	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2D50.003	1	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Maintain - Rest - Maintain	45° left+right	45-2819.2D90.003	1	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2D20.003	2	0,022 kg

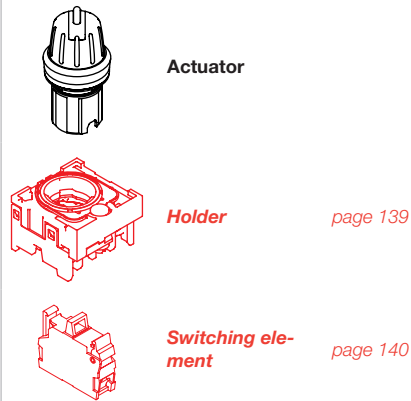
45 Raised design

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic green long	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2D50.003	2	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Momentary - Rest - Momentary	45° left+right	45-280S.2D90.003	2	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal silver	Metal	Maintain - Rest - Momentary	45° left+right	45-2816.2D20.003	3	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Maintain - Rest - Momentary	45° left+right	45-2816.2D90.003	3	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic red long	Metal silver	Metal	Momentary - Rest - Maintain	45° left+right	45-280X.2D20.003	4	0,022 kg
	Selector switch actuator 3 positions, long lever, Front dimension Ø 29,5 mm						
Plastic white long	Metal silver	Metal	Momentary - Rest - Maintain	45° left+right	45-280X.2D90.003	4	0,022 kg

			
Wiring diagram 1	Wiring diagram 2	Wiring diagram 3	Wiring diagram 4

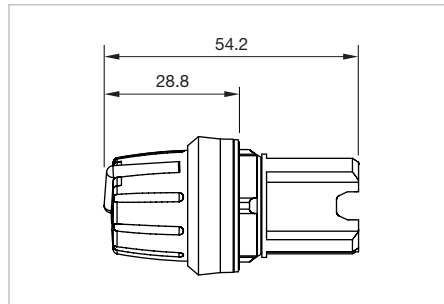
Selector switch actuator 4 positions round lever, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

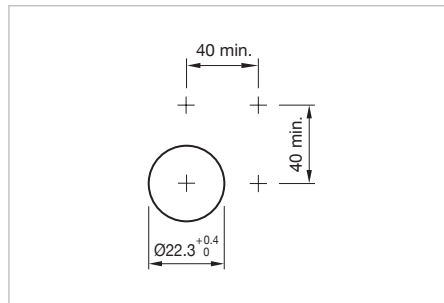
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]






Product can differ from the current configuration.



Mounting cut-outs [mm]

Additional Information

- Use only with holder for 4 elements
- Mounting depth incl. front plate, see chapter «drawings»

Lever	Front bezel	Housing material	Switching action	Switching angle	Part No.	Wiring diagram	Weight
	Selector switch actuator 4 positions, round lever, Front dimension Ø 29,5 mm						
Plastic white round	Plastic black	Plastic	Maintain - Maintain - Maintain - Maintain	90°	45-2845.1E90.002	1	0,023 kg
	Selector switch actuator 4 positions, round lever, Front dimension Ø 29,5 mm						
Plastic white round	Metal sandgrey	Plastic	Maintain - Maintain - Maintain - Maintain	90°	45-2845.3E90.002	1	0,023 kg
	Selector switch actuator 4 positions, round lever, Front dimension Ø 29,5 mm						
Plastic white round	Metal silver	Metal	Maintain - Maintain - Maintain - Maintain	90°	45-2845.2E90.002	1	0,023 kg

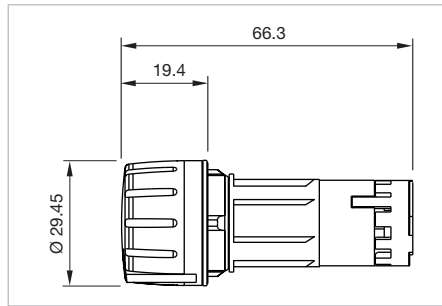


45 Raised design

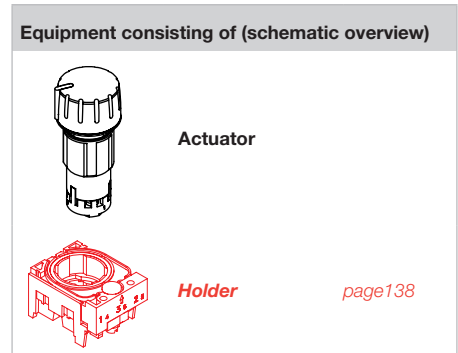
Potentiometer, IP66, IP67, IP69K



Product can differ from the current configuration.

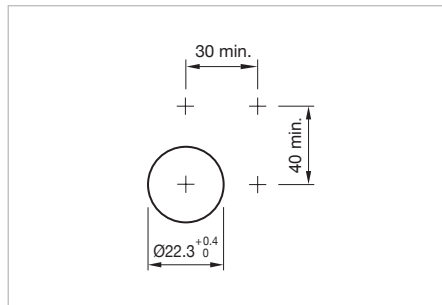


Dimensions [mm]



Additional Information

- Power 0.5 W
- Slewing range 275° ±2°
- Mounting depth incl. front plate, see chapter «drawings»



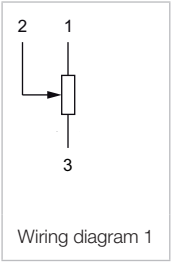
Mounting cut-outs [mm]

Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Product attribute	Front bezel	Housing material	Part No.	Component layout	Wiring diagram	Weight
<p>Potentiometer, Front dimension Ø 30 mm</p>						
Resistor 1 kOhm / linear	Plastic black	Plastic	45-2P03.1E10.000	1	1	0,06 kg
Resistor 4.7 kOhm / linear	Plastic black	Plastic	45-2P04.1E10.000	1	1	0,06 kg
Resistor 10 kOhm / linear	Plastic black	Plastic	45-2P02.1E10.000	1	1	0,06 kg
Resistor 47 kOhm / linear	Plastic black	Plastic	45-2P06.1E10.000	1	1	0,06 kg
Resistor 100 kOhm / linear	Plastic black	Plastic	45-2P01.1E10.000	1	1	0,06 kg
Resistor 470 kOhm / linear	Plastic black	Plastic	45-2P05.1E10.000	1	1	0,06 kg
<p>Potentiometer, Front dimension Ø 30 mm</p>						
Resistor 1 kOhm / linear	Metal silver	Metal	45-2P03.2E10.000	1	1	0,06 kg
Resistor 4.7 kOhm / linear	Metal silver	Metal	45-2P04.2E10.000	1	1	0,06 kg
Resistor 10 kOhm / linear	Metal silver	Metal	45-2P02.2E10.000	1	1	0,06 kg
Resistor 47 kOhm / linear	Metal silver	Metal	45-2P06.2E10.000	1	1	0,06 kg
Resistor 100 kOhm / linear	Metal silver	Metal	45-2P01.2E10.000	1	1	0,06 kg
Resistor 470 kOhm / linear	Metal silver	Metal	45-2P05.2E10.000	1	1	0,06 kg

The component layouts you will find from page 156

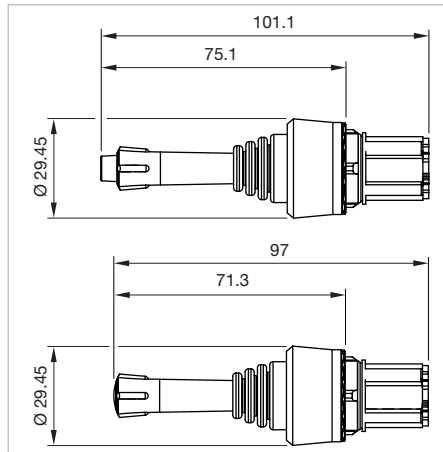


45 Raised design

Toggle stick, IP 65, IP 67

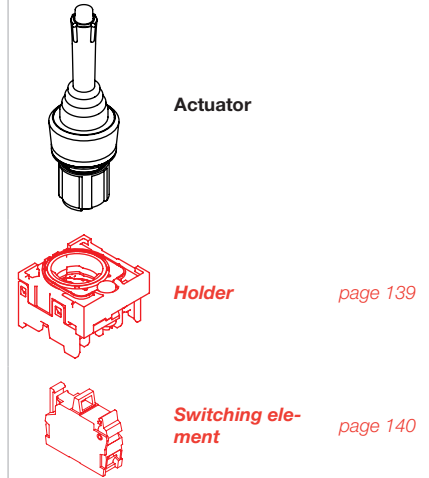


Product can differ from the current configuration.



Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator

Holder

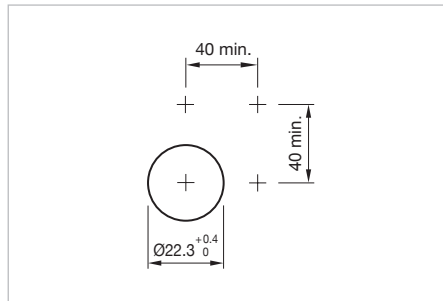
page 139

Switching element

page 140

Additional Information



- Use only with holder for 4 elements
- Mounting depth incl. front plate, see chapter «drawings»







Mounting cut-outs [mm]

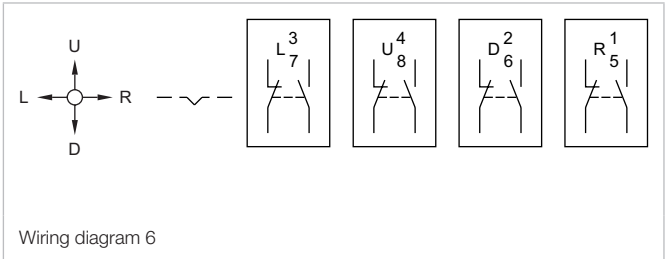
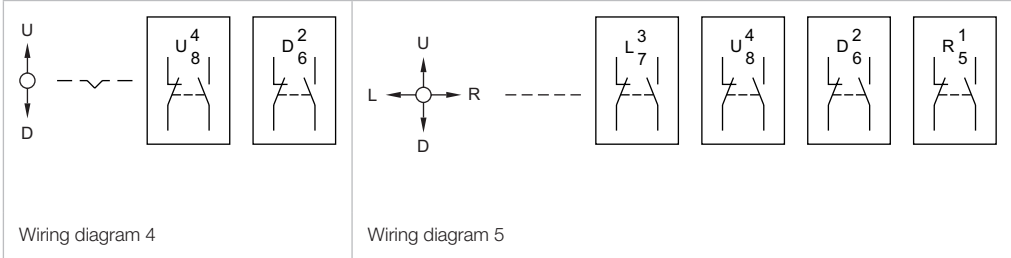
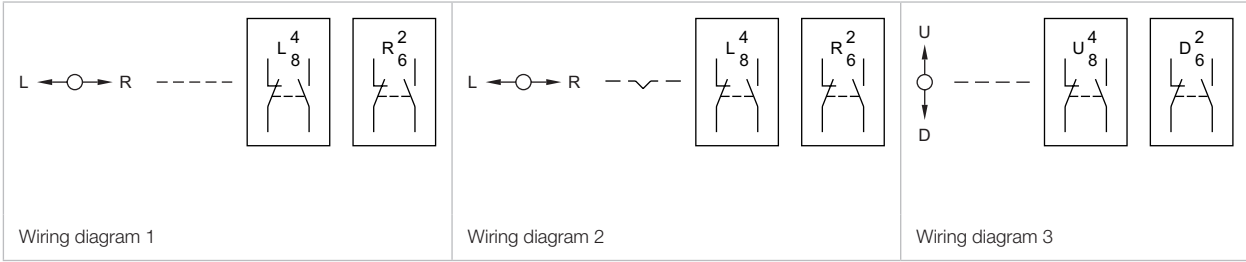
Each Part Number listed below includes all the black components shown in the 3D-drawing.

To obtain a complete unit, please select the red components from the pages shown.

Product attribute	Front bezel	Housing material	Switching action	Part No.	Wiring diagram	Weight
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R), lockable	Plastic black	Plastic	Momentary	45-2F13.1010.000	1	0,035 kg
2 positions (LR), lockable	Plastic black	Plastic	Maintained	45-2F26.1010.000	2	0,035 kg
2 positions (U-D), lockable	Plastic black	Plastic	Momentary	45-2F40.1010.000	3	0,035 kg
2 positions (U-D), lockable	Plastic black	Plastic	Maintained	45-2F43.1010.000	4	0,035 kg
4 positions, lockable	Plastic black	Plastic	Momentary	45-2F14.1010.000	5	0,035 kg
4 positions, lockable	Plastic black	Plastic	Maintained	45-2F27.1010.000	6	0,035 kg
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R), lockable	Metal sandgrey	Plastic	Momentary	45-2F13.3010.000	1	0,042 kg
2 positions (LR), lockable	Metal sandgrey	Plastic	Maintained	45-2F26.3010.000	2	0,042 kg
2 positions (U-D), lockable	Metal sandgrey	Plastic	Momentary	45-2F40.3010.000	3	0,042 kg
2 positions (U-D), lockable	Metal sandgrey	Plastic	Maintained	45-2F43.3010.000	4	0,042 kg
4 positions, lockable	Metal sandgrey	Plastic	Momentary	45-2F14.3010.000	5	0,042 kg
4 positions, lockable	Metal sandgrey	Plastic	Maintained	45-2F27.3010.000	6	0,042 kg

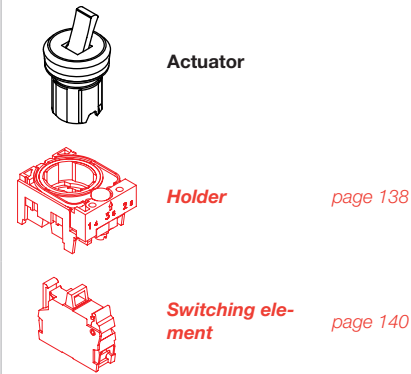
Product attribute	Front bezel	Housing material	Switching action	Part No.	Wiring diagram	Weight
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R), lockable	Metal silver	Metal	Momentary	45-2F13.2010.000	1	0,081 kg
2 positions (LR), lockable	Metal silver	Metal	Maintained	45-2F26.2010.000	2	0,081 kg
2 positions (U-D), lockable	Metal silver	Metal	Momentary	45-2F40.2010.000	3	0,081 kg
2 positions (U-D), lockable	Metal silver	Metal	Maintained	45-2F43.2010.000	4	0,081 kg
4 positions, lockable	Metal silver	Metal	Momentary	45-2F14.2010.000	5	0,081 kg
4 positions, lockable	Metal silver	Metal	Maintained	45-2F27.2010.000	6	0,081 kg
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R)	Plastic black	Plastic	Momentary	45-2F0T.1010.000	1	0,035 kg
2 positions (LR)	Plastic black	Plastic	Maintained	45-2F20.1010.000	2	0,035 kg
2 positions (U-D)	Plastic black	Plastic	Momentary	45-2F38.1010.000	3	0,035 kg
2 positions (UD)	Plastic black	Plastic	Maintained	45-2F41.1010.000	4	0,035 kg
4 positions	Plastic black	Plastic	Momentary	45-2F0V.1010.000	5	0,035 kg
4 positions	Plastic black	Plastic	Maintained	45-2F21.1010.000	6	0,035 kg
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R)	Metal sandgrey	Plastic	Momentary	45-2F0T.3010.000	1	0,042 kg
2 positions (LR)	Metal sandgrey	Plastic	Maintained	45-2F20.3010.000	2	0,042 kg
2 positions (U-D)	Metal sandgrey	Plastic	Momentary	45-2F38.3010.000	3	0,042 kg
2 positions (UD)	Metal sandgrey	Plastic	Maintained	45-2F41.3010.000	4	0,042 kg
4 positions	Metal sandgrey	Plastic	Momentary	45-2F0V.3010.000	5	0,042 kg
4 positions	Metal sandgrey	Plastic	Maintained	45-2F21.3010.000	6	0,042 kg
 <p>Toggle stick, Front dimension Ø 29,5 mm</p>						
2 positions (L-R)	Metal silver	Metal	Momentary	45-2F0T.2010.000	1	0,081 kg
2 positions (LR)	Metal silver	Metal	Maintained	45-2F20.2010.000	2	0,081 kg
2 positions (U-D)	Metal silver	Metal	Momentary	45-2F38.2010.000	3	0,081 kg
2 positions (UD)	Metal silver	Metal	Maintained	45-2F41.2010.000	4	0,081 kg
4 positions	Metal silver	Metal	Momentary	45-2F0V.2010.000	5	0,081 kg
4 positions	Metal silver	Metal	Maintained	45-2F21.2010.000	6	0,081 kg

45 Raised design



Toggle switches, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Each Part Number listed below includes all the black components shown in the 3D-drawing.

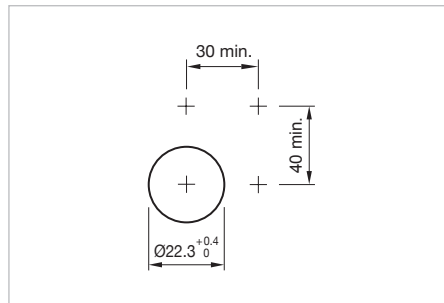
To obtain a complete unit, please select the red components from the pages shown.



Dimensions [mm]



Product can differ from the current configuration.

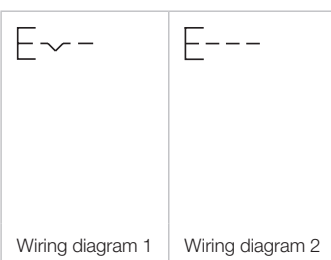


Mounting cut-outs [mm]

Additional Information

- Mounting depth incl. front plate, see chapter «drawings»

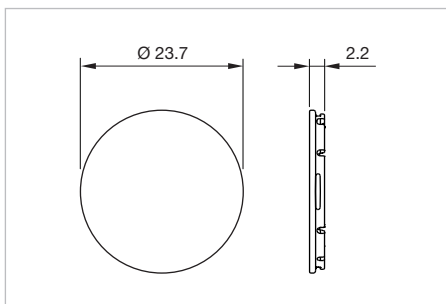
Lever	Front bezel	Switching action	Part No.	Wiring diagram	Weight
	Toggle switch actuator, Front dimension Ø 29,5 mm				
Plastic black	Plastic black	Maintained	45-2N42.1010.000	1	0,015 kg
Plastic black	Plastic black	Momentary	45-2N39.1010.000	2	0,015 kg
	Toggle switch actuator, Front dimension Ø 29,5 mm				
Plastic black	Metal sandgrey	Maintained	45-2N42.3010.000	1	0,020 kg
Plastic black	Metal sandgrey	Momentary	45-2N39.3010.000	2	0,020 kg
	Toggle switch actuator, Front dimension Ø 29,5 mm				
Plastic black	Metal silver	Maintained	45-2N42.2010.000	1	0,038 kg
Plastic black	Metal silver	Momentary	45-2N39.2010.000	2	0,038 kg










45 Accessories







Front

Lens plastic round flat

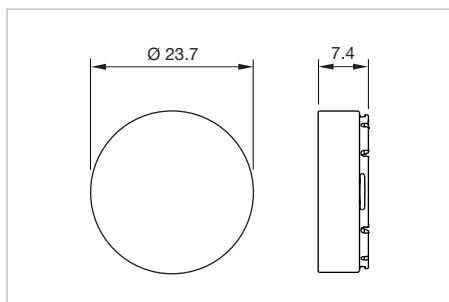


Dimensions [mm]


Dimension	Lens	Part No.	Weight
	Lens		
Ø 23.7 mm	Plastic black	45-553.0100	0,001 kg
	Lens		
Ø 23.7 mm	Plastic red	45-553.0200	0,001 kg
	Lens		
Ø 23.7 mm	Plastic yellow	45-553.0400	0,001 kg
	Lens		
Ø 23.7 mm	Plastic green	45-553.0500	0,001 kg
	Lens		
Ø 23.7 mm	Plastic blue	45-553.0600	0,001 kg
	Lens		
Ø 23.7 mm	Plastic white	45-553.0900	0,001 kg
	Lens		
Ø 23.7 mm	Plastic red	45-553.0E00	0,001 kg

Dimension	Lens	Part No.	Weight
	Lens		
Ø 23.7 mm	Plastic ambergris	45-553.0F00	0,001 kg
	Lens		
Ø 23.7 mm	Plastic yellow	45-553.0G00	0,001 kg
	Lens		
Ø 23.7 mm	Plastic green	45-553.0H00	0,001 kg
	Lens		
Ø 23.7 mm	Plastic blue	45-553.0J00	0,001 kg
	Lens		
Ø 23.7 mm	Plastic white	45-553.0K00	0,001 kg
	Lens		
Ø 23.7 mm	Plastic colourless	45-553.0N00	0,001 kg







Lens plastic round increased



Dimensions [mm]

Dimension	Lens	Part No.	Weight
	Lens		
Ø 23.7 mm	Plastic black	45-552.0100	0,002 kg

45 Accessories

Dimension	Lens	Part No.	Weight
	Lens		
Ø 23.7 mm	Plastic red	45-552.0200	0,002 kg
	Lens		
Ø 23.7 mm	Plastic yellow	45-552.0400	0,002 kg
	Lens		
Ø 23.7 mm	Plastic green	45-552.0500	0,002 kg
	Lens		
Ø 23.7 mm	Plastic red	45-552.0E00	0,002 kg
	Lens		
Ø 23.7 mm	Plastic yellow	45-552.0G00	0,002 kg
	Lens		
Ø 23.7 mm	Plastic green	45-552.0H00	0,002 kg
	Lens		
Ø 23.7 mm	Plastic blue	45-552.0J00	0,002 kg
	Lens		
Ø 23.7 mm	Plastic colourless	45-552.0K00	0,002 kg

Marking plate

Additional Information

- for pushbutton illuminated
- Markable, see «Marking»
- To change the text plate, the push cap is removed with a screwdriver and then snapped back

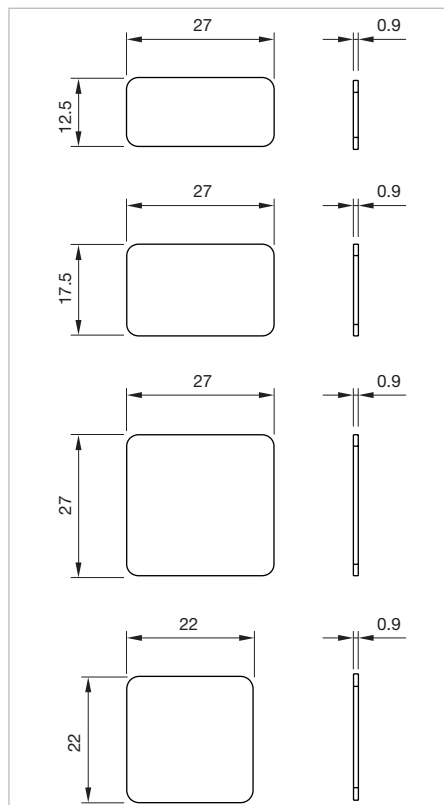


Dimensions [mm]

Marking plate illumination	Marking plate	Part No.	Weight
	Marking plate		
illuminative	white translucent	45-563.0K00	0,001 kg





Legend plate

- Markable, see «Marking»



Dimensions [mm]




45 Accessories









Product attribute	Dimension	Material	Colour	Mounting type	Part No.	Weight
	Legend plate					
For sticking or snapping in place	27 x 12.5 mm	Plastic	black	self-adhesive	45-573.1102	0,001 kg
For sticking or snapping in place	27 x 12.5 mm	Plastic	red	self-adhesive	45-573.1202	0,001 kg
For sticking or snapping in place	27 x 12.5 mm	Plastic	silver	self-adhesive	45-573.1A02	0,001 kg
	Legend plate					
For sticking or snapping in place	27 x 17.5 mm	Plastic	black	self-adhesive	45-573.1103	0,001 kg
For sticking or snapping in place	27 x 17.5 mm	Plastic	silver	self-adhesive	45-573.1A03	0,001 kg
	Legend plate					
For sticking or snapping in place	27 x 27 mm	Plastic	black	self-adhesive	45-573.1105	0,001 kg
For sticking or snapping in place	27 x 27 mm	Plastic	silver	self-adhesive	45-573.1A05	0,001 kg
	Legend plate					
For sticking or snapping in place	22 x 22 mm	Plastic	silver	self-adhesive	45-573.1A04	0,001 kg
For sticking	22 x 22 mm	Plastic	black	self-adhesive	45-573.1104	0,001 kg

Emergency-stop legend




Additional Information

- Front panel thickness 3 mm max.


Product attribute	Dimension	Mounting cut-out	Marking	Material	Colour	Part No.	Weight
	Emergency-stop legend						
-	Ø 45 x 1 mm	Ø 22,3 mm	without marking	Plastic	yellow	45-50K.1407	0,005 kg
	Emergency-stop legend						
-	Ø 75 x 1 mm	Ø 22,3 mm	without marking	Plastic	yellow	45-50K.1408	0,010 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	without marking	Plastic	yellow	45-50J.1400	0,004 kg

Product attribute	Dimension	Mounting cut-out	Marking	Material	Colour	Part No.	Weight
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	NOT - HALT	Plastic	yellow	45-50J.140Q	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	EMERGENCY STOP	Plastic	yellow	45-50J.140S	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	NOT - AUS	Plastic	yellow	45-50J.140P	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	ARRET D'URGENCE	Plastic	yellow	45-50J.140T	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	EMERGENZA	Plastic	yellow	45-50J.140V	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	NODSTOP	Plastic	yellow	45-50J.140W	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	紧急停止	Plastic	yellow	45-50J.140X	0,004 kg
	Emergency-stop legend						
self-adhesive	Ø 75 x 1 mm	Ø 23 mm	NOT-HALT EMERGENCY STOP EMER- GENZA EMER- GENCIA	Plastic	yellow	45-50J.140Z	0,004 kg

45 Accessories

Product attribute	Dimension	Mounting cut-out	Marking	Material	Colour	Part No.	Weight
	Emergency-stop legend						
self-adhesive	150 x 38 mm	Ø 23 mm	without marking	Plastic	yellow	45-561.1400	0,004 kg
	Emergency-stop legend						
self-adhesive	150 x 38 mm	Ø 23 mm	NOT - AUS	Plastic	yellow	45-561.140P	0,004 kg
	Emergency-stop legend						
self-adhesive	150 x 38 mm	Ø 23 mm	without marking	Plastic	yellow	45-562.1400	0,004 kg

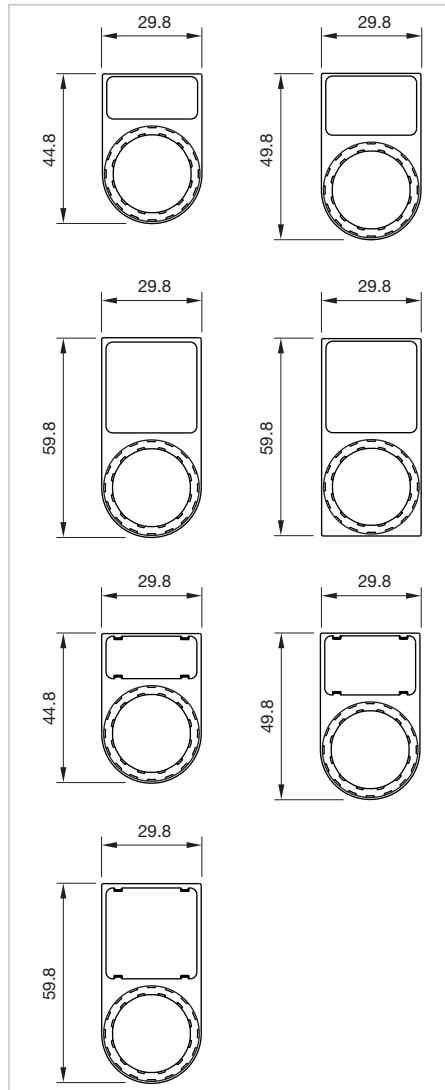
Legend plate for potentiometer

Dimension	Material	Colour	Part No.	Weight
	Legend plate for potentiometer			
Ø 40 mm	Plastic	black	45-538.1100	0,001 kg




Legend support without legend

Additional Information

- For sticking or snapping in place



Dimensions [mm]

Product attribute	Material	Colour	Part No.	Weight
 <p>Legend support without legend</p>				
for legend 27 mm x 12,5 mm	Plastic	black	45-564.1102	0,002 kg
 <p>Legend support without legend</p>				
for legend 27 mm x 12,5 mm	Plastic	black	45-567.1103	0,002 kg
 <p>Legend support without legend</p>				
for legend 27 mm x 27 mm	Plastic	black	45-569.1105	0,002 kg

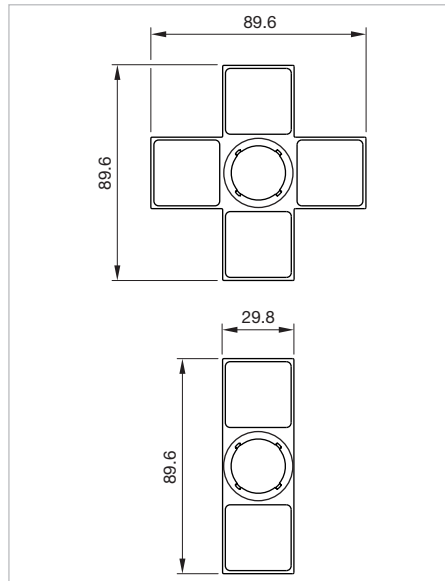
45 Accessories

Product attribute	Material	Colour	Part No.	Weight
 <p>Legend support without legend</p>				
for legend 27 mm x 27 mm	Plastic	black	45-570.1105	0,002 kg
 <p>Legend support without legend</p>				
for legend 27 mm x 12,5 mm	Plastic	black	45-564.1110	0,002 kg
 <p>Legend support without legend</p>				
for legend 27 mm x 17,5 mm	Plastic	black	45-567.1111	0,002 kg
 <p>Legend support without legend</p>				
for legend 27 mm x 27 mm	Plastic	black	45-569.1112	0,002 kg



Legend support without legend for toggle stick

Additional Information

- For sticking or snapping in place



Dimensions [mm]

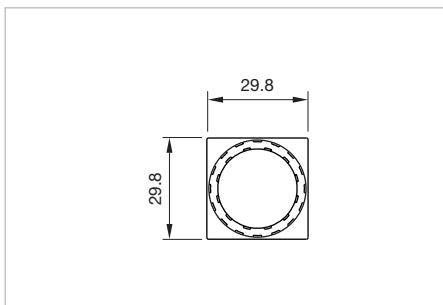
Product attribute	Material	Colour	Part No.	Weight
 <p>Legend support without legend for toggle stick</p>				
for legend 27 mm x 27 mm	Plastic	black	45-571.1105	0,002 kg
 <p>Legend support without legend for toggle stick</p>				
for legend 27 mm x 27 mm	Plastic	black	45-572.1105	0,002 kg

45 Accessories

Single frame, IP66, IP67, IP69K

Additional Information

- For design square



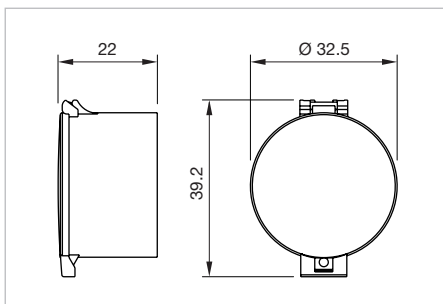
Dimensions [mm]

Dimension	Material	Colour	Part No.	Weight
	Single frame for design square			
29.8 x 29.8 mm	Plastic	black	45-558.0000	0,001 kg



Protective cover, IP66, IP67

Additional Information







- Hinged, with means for sealing
- Please note that bigger minimum distances are necessary



Dimensions [mm]

Material	Colour	Optics	Part No.	Weight
	Protective cover			
Plastic	black	opaque	45-555.1100	0,012 kg
	Protective cover			
Plastic	colourless	transparent	45-555.1K00	0,012 kg

Protective cap

Product attribute	Front protection	Material	Colour	Optics	Part No.	Weight
 <p>Protective cap for pushbutton</p>						
for lens raised above bezel	IP66, IP67	Silicone	colourless	transparent	45-544.1K00	0,008 kg
for lens flush	IP66, IP67	Silicone	colourless	transparent	45-545.1K00	0,008 kg
 <p>Protective cap for twin pushbutton</p>						
for lens raised above bezel	IP66, IP67	Silicone	colourless	transparent	45-547.1K00	0,011 kg
for lens flush	IP66, IP67	Silicone	colourless	transparent	45-548.1K00	0,011 kg
 <p>Protective cap for Emergency stop switch</p>						
for lens raised above bezel	IP66, IP67	Silicone	colourless	transparent	45-542.1K00	0,015 kg
 <p>Protective cap for Mushroom-head pushbutton</p>						
for Mushroom-head pushbutton Ø 40	IP66, IP67	Silicone	colourless	transparent	45-543.1K00	0,006 kg
 <p>Protective cap for selector switch</p>						
for lever switch, short lever	IP66, IP67	Silicone	colourless	transparent	45-546.1K00	0,006 kg
 <p>Protective cap for keylock switch</p>						
for keylock switch	IP66, IP67	Silicone	colourless	transparent	45-50F.1100	0,006 kg

45 Accessories

Cover, IP66, IP67, IP69K



Dimensions [mm]

Product attribute	Material	Colour	Optics	Part No.	Weight
 <p>Cover for locking device</p>					
For pushbuttons, selector switches with round or short lever	Metal/plastic	silver/colourless	transparent	45-529.2100	0,043 kg



E-stop protective shroud

Additional Information

- The protection shroud is not suitable for a proper use of emergency-stop. It can obstruct a spontaneous operation of the emergency-stop

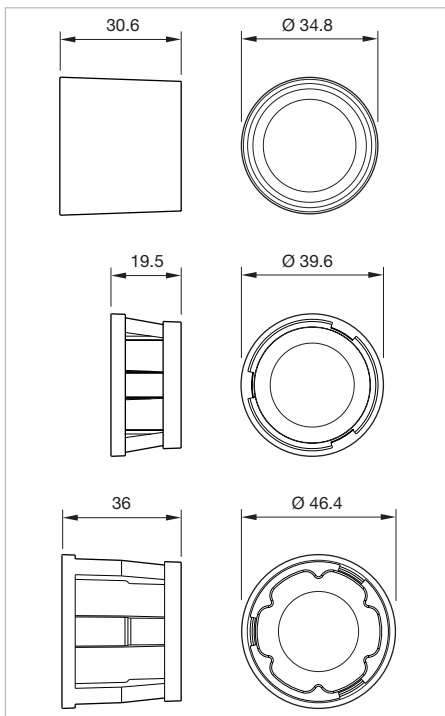


Dimensions [mm]




Material	Colour	Product attribute	Part No.	Weight
	E-stop protective shroud			
Plastic	yellow	-	45-549.1400	0,052 kg
	E-stop protective shroud			
Plastic	grey	-	45-549.1800	0,052 kg
	E-stop protective shroud			
Plastic	yellow	-	45-550.1400	0,044 kg
	E-stop protective shroud			
Metal	yellow	For Emergency stop switch Ø 40 mm, for 5 padlocks	45-539.2400	0,162 kg
	E-stop protective shroud			
Metal	grey	For Emergency stop switch Ø 40 mm, for 5 padlocks	45-539.2800	0,153 kg

45 Accessories


Protective shroud, IP66, IP67, IP69K



Dimensions [mm]

Product attribute	Material	Colour	Part No.	Weight
 <p>Protective shroud</p>				
for pushbutton, selector switch	Plastic	black	45-50N.1100	0,010 kg
 <p>Protective shroud</p>				
for pushbuttons	Metal	silver	45-50Q.2100	0,020 kg
 <p>Protective shroud</p>				
for mushroom-head pushbutton Ø 40 mm	Metal	silver	45-50P.0100	0,020 kg

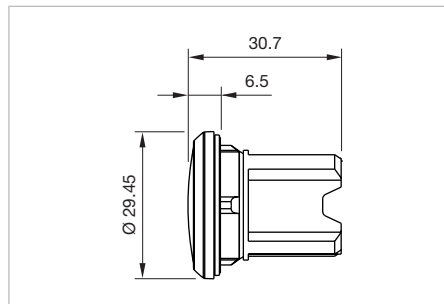
Sun collar

Product attribute	Material	Colour	Part No.	Weight
 <p>Sun collar</p>				
for pushbutton illuminated	Plastic	black	45-560.1100	0,010 kg




Blind plug, IP66, IP67, IP69K

Additional Information

- Use with plastic or metal holder










Dimensions [mm]

Mounting cut-out	Material	Colour	Part No.	Weight
 <p>Blind plug</p>				
Ø 22,3 mm	Plastic	black	45-506.1100	0,010 kg
 <p>Blind plug</p>				
Ø 22,3 mm	Metal sandgrey	silver	45-506.3A00	0,008 kg
 <p>Blind plug</p>				
Ø 22,3 mm	Metal shiny	silver	45-506.2A00	0,038 kg

45 Accessories

Locking device, IP66, IP67, IP69K

Product attribute	Dimension	Material	Colour	Part No.	Weight
 <p>Locking device</p>					
for pushbutton with lens raised	47 x 43.1 x 25.1 mm	Metal	silver	45-531.2100	0,047 kg
 <p>Locking device</p>					
for pushbutton with lens flat	47 x 43.1 x 25.1 mm	Metal	silver	45-532.2100	0,047 kg
for mushroom-head pushbutton Ø 30 mm or Ø 40 mm	47 x 43.1 x 25.1 mm	Metal	silver	45-530.2100	0,047 kg
 <p>Locking device</p>					
for selector switch in position left	47 x 47.1 x 21.1 mm	Metal	silver	45-534.2100	0,047 kg
 <p>Locking device</p>					
for selector switch in position center	47 x 47.1 x 21.1 mm	Metal	silver	45-533.2100	0,047 kg
 <p>Locking device</p>					
for selector switch in position right	47 x 47.1 x 21.1 mm	Metal	silver	45-536.2100	0,047 kg
 <p>Locking device</p>					
for selector switch in position center and right	47 x 47.1 x 21.1 mm	Metal	silver	45-535.2100	0,047 kg
 <p>Locking device</p>					
for selector switch in position center and left	47 x 47.1 x 21.1 mm	Metal	silver	45-537.2100	0,047 kg


ID-Key

Product attribute	Colour	Part No.	Weight
 <p>ID-Key</p>			
Design of the RFID coding: Step 1	green	45-50T.0500	0.007 kg
 <p>ID-Key</p>			
Design of the RFID coding: Step 1+2	yellow	45-50V.0400	0.007 kg
 <p>ID-Key</p>			
Design of the RFID coding: Step 1+2+3	red	45-50W.0200	0.007 kg
 <p>ID-Key</p>			
Design of the RFID coding: Step 1+2+3+4	blue	45-574.0600	0.007 kg

Spare key

Additional Information

- For standard lock RONIS T254

Product attribute	Part No.	Weight
 <p>Spare key</p>		
2 spare keys	45-522.0900	0,007 kg



45 Accessories

Rear side

Holder for 3 elements

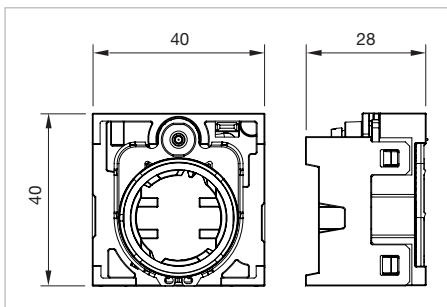


Dimensions [mm]

Product attribute	Material	Part No.	Component layout	Weight
 <p>Holder for 3 elements</p>				
for all buttons except selector switch 4 positions and toggle stick	Plastic	45-2300.1000.000	2	0,028 kg
 <p>Holder for 3 elements</p>				
for all buttons except selector switch 4 positions and toggle stick	Metal	45-2300.2000.000	2	0,046 kg

The component layouts you will find from page 156

Holder for 4 elements



Dimensions [mm]






Product attribute	Material	Part No.	Component layout	Weight
 <p>Holder for 4 elements</p>				
for selector switch 4 positions and toggle stick	Plastic	45-2400.1000.000	3	0,028 kg
 <p>Holder for 4 elements</p>				
for selector switch 4 positions and toggle stick	Metal	45-2400.2000.000	3	0,046 kg










The component layouts you will find from page 156

Switching element front mounting







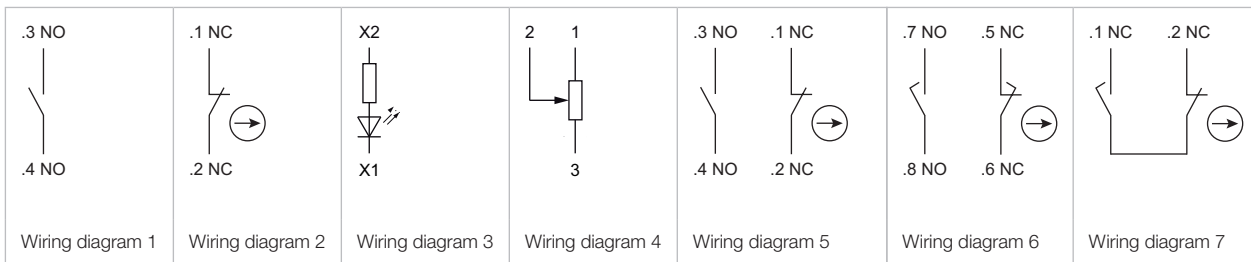
Dimensions [mm]
 X = Screw terminal,
 SP = Spring-type terminal

Switching current	Switching system	Contacts	Contact material	Terminal	Product attribute	Part No.	Wiring diagram	Weight
	Switching element							
10 A	Slow-make switching element	1 NO	Silver	Screw terminal	–	45-311.1Z10	1	0,010 kg
10 A	Slow-make switching element	1 NC	Silver	Screw terminal	–	45-312.1Z10	2	0,010 kg
	Switching element							
10 A	Slow-make switching element	2 NO	Silver	Screw terminal	not stackable	45-313.1Z10	3	0,018 kg
	Switching element							
10 A	Slow-make switching element	2 NC	Silver	Screw terminal	not stackable	45-314.1Z10	4	0,018 kg
	Switching element							
10 A	Slow-make switching element	1 NC + 1 NO	Silver	Screw terminal	not stackable	45-315.1Z10	5	0,018 kg
	Switching element							
10 A	Slow-make switching element	1 NO	gold-plated silver	Screw terminal	–	45-311.1X10	1	0,010 kg
10 A	Slow-make switching element	1 NC	gold-plated silver	Screw terminal	–	45-312.1X10	2	0,010 kg

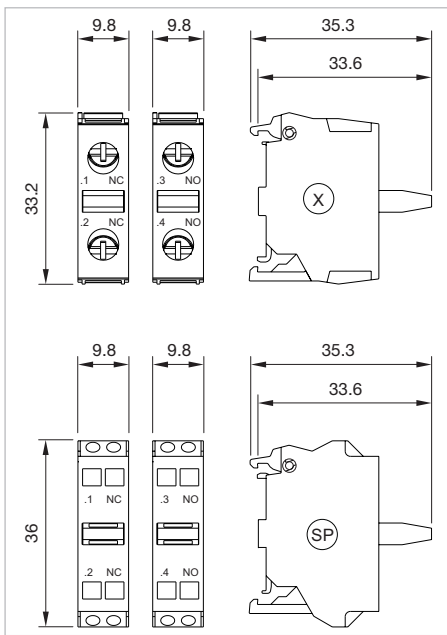
Switching current	Switching system	Contacts	Contact material	Terminal	Product attribute	Part No.	Wiring diagram	Weight
	Switching element							
10 A	Slow-make switching element	1NC leading 1 NO	gold-plated silver	Screw terminal	not stackable	45-316.1X10	6	0,018 kg
	Switching element							
10 A	Slow-make switching element	1 NO	Silver	Spring-type terminal	–	45-311.1Z40	1	0,010 kg
10 A	Slow-make switching element	1 NC	Silver	Spring-type terminal	–	45-312.1Z40	2	0,010 kg
	Switching element							
10 A	Slow-make switching element	2 NO	Silver	Spring-type terminal	not stackable	45-313.1Z40	3	0,018 kg
	Switching element							
10 A	Slow-make switching element	2 NC	Silver	Spring-type terminal	not stackable	45-314.1Z40	3	0,018 kg
	Switching element							
10 A	Slow-make switching element	1 NC + 1 NO	Silver	Spring-type terminal	not stackable	45-315.1Z40	5	0,018 kg
	Switching element							
10 A	Slow-make switching element	1NC leading 1 NO	Silver	Spring-type terminal	not stackable	45-316.1Z40	6	0,018 kg
	Switching element							
10 A	Slow-make switching element	1NC installation monitoring contact	Silver	Spring-type terminal	not stackable	45-317.1Z40	7	0,018 kg
	Switching element							
10 A	Slow-make switching element	1 NO	gold-plated silver	Spring-type terminal	–	45-311.1X40	1	0,010 kg
	Switching element							
10 A	Slow-make switching element	1 NC	gold-plated silver	Spring-type terminal	–	45-312.1X40	2	0,010 kg

45 Accessories





Switching current	Switching system	Contacts	Contact material	Terminal	Product attribute	Part No.	Wiring diagram	Weight
 <p style="text-align: center;">Switching element</p>								
10 A	Slow-make switching element	2 NO	gold-plated silver	Spring-type terminal	not stackable	45-313.1X40	3	0,018 kg
 <p style="text-align: center;">Switching element</p>								
10 A	Slow-make switching element	2 NC	gold-plated silver	Spring-type terminal	not stackable	45-314.1X40	3	0,018 kg
 <p style="text-align: center;">Switching element</p>								
10 A	Slow-make switching element	1 NC + 1 NO	gold-plated silver	Spring-type terminal	not stackable	45-315.1X40	5	0,018 kg
 <p style="text-align: center;">Switching element</p>								
10 A	Slow-make switching element	1NC leading 1 NO	gold-plated silver	Spring-type terminal	not stackable	45-316.1X40	6	0,018 kg

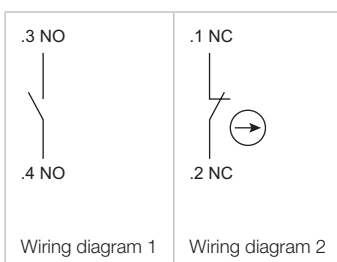


Switching element base mounting



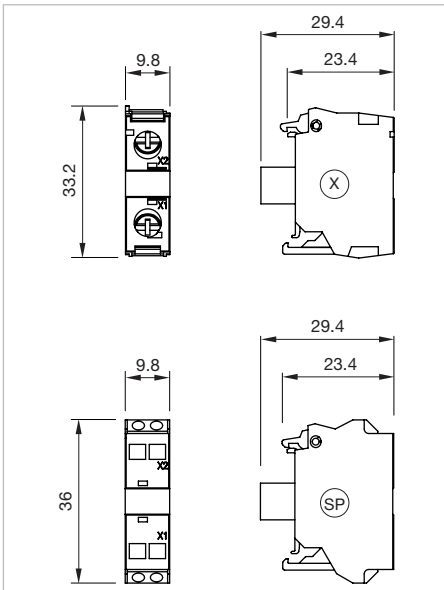
Dimensions [mm]
 X = Screw terminal,
 SP = Spring-type terminal

Switching current	Switching system	Contacts	Contact material	Terminal	Part No.	Wiring diagram	Weight
	Switching element						
10 A	Slow-make switching element	1 NO	Silver	Screw terminal	45-311.2Z10	1	0,010 kg
	Switching element						
10 A	Slow-make switching element	1 NC	Silver	Screw terminal	45-312.2Z10	2	0,010 kg
	Switching element						
10 A	Slow-make switching element	1 NO	Silver	Spring-type terminal	45-311.2Z40	1	0,010 kg
	Switching element						
10 A	Slow-make switching element	1 NC	Silver	Spring-type terminal	45-312.2Z40	2	0,010 kg



45 Accessories


Illumination element front mounting



Dimensions [mm]

X = Screw terminal,

SP = Spring-type terminal

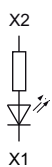
LED colour	Operating voltage	Operation current	Lumi. intensity	Terminal	Part No.	Wiring dia-gram	Weight
 <p>Illumination element</p>							
red	6-24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1E11	1	0,009 kg
amber	6-24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1F11	1	0,009 kg
yellow	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1G11	1	0,009 kg
green	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1H11	1	0,009 kg
blue	6-24 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.1J11	1	0,009 kg
white	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1N11	1	0,009 kg
red	24-240 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1E12	1	0,010 kg
amber	24-240 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1F12	1	0,010 kg
yellow	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1G12	1	0,010 kg
green	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1H12	1	0,010 kg
blue	24-240 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.1J12	1	0,010 kg
white	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1N12	1	0,010 kg
red	24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1E16	1	0,009 kg
amber	24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.1F16	1	0,009 kg
yellow	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1G16	1	0,009 kg
green	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1H16	1	0,009 kg
blue	24 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.1J16	1	0,009 kg
white	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.1N16	1	0,009 kg
red	110 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.1E17	1	0,010 kg
amber	110 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.1F17	1	0,010 kg
yellow	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1G17	1	0,010 kg
green	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1H17	1	0,010 kg
blue	110 VAC	20 mA	280...710 mcd	Screw terminal	45-320.1J17	1	0,010 kg
white	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1N17	1	0,010 kg
red	230 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.1E18	1	0,010 kg

LED colour	Operating voltage	Operation current	Lumi. intensity	Terminal	Part No.	Wiring diagram	Weight
amber	230 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.1F18	1	0,010 kg
yellow	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1G18	1	0,010 kg
green	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1H18	1	0,010 kg
blue	230 VAC	20 mA	280...710 mcd	Screw terminal	45-320.1J18	1	0,010 kg
white	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.1N18	1	0,010 kg



Illumination element

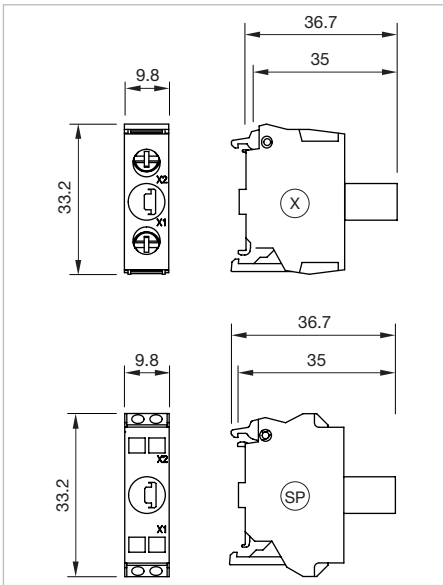
red	6-24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1E41	1	0,009 kg
amber	6-24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1F41	1	0,009 kg
yellow	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1G41	1	0,009 kg
green	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1H41	1	0,009 kg
blue	6-24 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.1J41	1	0,009 kg
white	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1N41	1	0,009 kg
red	24-240 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1E42	1	0,010 kg
amber	24-240 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1F42	1	0,010 kg
yellow	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1G42	1	0,010 kg
green	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1H42	1	0,010 kg
blue	24-240 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.1J42	1	0,010 kg
white	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1N42	1	0,010 kg
red	24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1E46	1	0,009 kg
amber	24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1F46	1	0,009 kg
yellow	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1G46	1	0,009 kg
green	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1H46	1	0,009 kg
blue	24 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.1J46	1	0,009 kg
white	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1N46	1	0,009 kg
red	110 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1E47	1	0,010 kg
amber	110 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1F47	1	0,010 kg
yellow	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1G47	1	0,010 kg
green	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1H47	1	0,010 kg
blue	110 VAC	20 mA	280...710 mcd	Spring-type terminal	45-320.1J47	1	0,010 kg
white	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1N47	1	0,010 kg
red	230 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1E48	1	0,010 kg
amber	230 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.1F48	1	0,010 kg
yellow	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1G48	1	0,010 kg
green	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1H48	1	0,010 kg
blue	230 VAC	20 mA	280...710 mcd	Spring-type terminal	45-320.1J48	1	0,010 kg
white	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.1N48	1	0,010 kg




Wiring diagram 1

45 Accessories

Illumination element base mounting



Dimensions [mm]
 X = Screw terminal,
 SP = Spring-type terminal

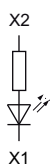
LED colour	Operating voltage	Operation current	Lumi. intensity	Terminal	Part No.	Wiring dia-gram	Weight
	Illumination element						
red	6-24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.2E11	1	0,009 kg
amber	6-24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.2F11	1	0,009 kg
yellow	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2G11	1	0,009 kg
green	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2H11	1	0,009 kg
blue	6-24 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.2J11	1	0,009 kg
white	6-24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2N11	1	0,009 kg
red	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2E12	1	0,009 kg
amber	24-240 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.2F12	1	0,009 kg
yellow	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2G12	1	0,009 kg
green	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2H12	1	0,009 kg
blue	24-240 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.2J12	1	0,009 kg
white	24-240 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2N12	1	0,009 kg
red	24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.2E16	1	0,009 kg
amber	24 VAC/DC	20 mA	450...1120 mcd	Screw terminal	45-320.2F16	1	0,009 kg
yellow	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2G16	1	0,009 kg
green	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2H16	1	0,009 kg
blue	24 VAC/DC	20 mA	280...710 mcd	Screw terminal	45-320.2J16	1	0,009 kg
white	24 VAC/DC	20 mA	900...1400 mcd	Screw terminal	45-320.2N16	1	0,009 kg
red	110 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.2E17	1	0,009 kg
amber	110 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.2F17	1	0,009 kg
yellow	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2G17	1	0,009 kg
green	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2H17	1	0,009 kg
blue	110 VAC	20 mA	280...710 mcd	Screw terminal	45-320.2J17	1	0,009 kg
white	110 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2N17	1	0,009 kg
red	230 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.2E18	1	0,009 kg
amber	230 VAC	20 mA	450...1120 mcd	Screw terminal	45-320.2F18	1	0,009 kg

LED colour	Operating voltage	Operation current	Lumi. intensity	Terminal	Part No.	Wiring diagram	Weight
yellow	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2G18	1	0,009 kg
green	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2H18	1	0,009 kg
blue	230 VAC	20 mA	280...710 mcd	Screw terminal	45-320.2J18	1	0,009 kg
white	230 VAC	20 mA	900...1400 mcd	Screw terminal	45-320.2N18	1	0,009 kg



Illumination element

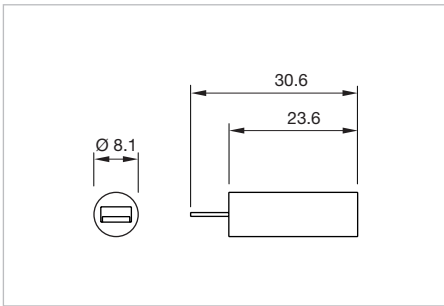
red	6-24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2E41	1	0,009 kg
amber	6-24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2F41	1	0,009 kg
yellow	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2G41	1	0,009 kg
green	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2H41	1	0,009 kg
blue	6-24 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.2J41	1	0,009 kg
white	6-24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2N41	1	0,009 kg
red	24-240 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2E42	1	0,009 kg
amber	24-240 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2F42	1	0,009 kg
yellow	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2G42	1	0,009 kg
green	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2H42	1	0,009 kg
blue	24-240 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.2J42	1	0,009 kg
white	24-240 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2N42	1	0,009 kg
red	24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2E46	1	0,009 kg
amber	24 VAC/DC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2F46	1	0,009 kg
yellow	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2G46	1	0,009 kg
green	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2H46	1	0,009 kg
blue	24 VAC/DC	20 mA	280...710 mcd	Spring-type terminal	45-320.2J46	1	0,009 kg
white	24 VAC/DC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2N46	1	0,009 kg
red	110 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2E47	1	0,009 kg
amber	110 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2F47	1	0,009 kg
yellow	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2G47	1	0,009 kg
green	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2H47	1	0,009 kg
blue	110 VAC	20 mA	280...710 mcd	Spring-type terminal	45-320.2J47	1	0,009 kg
white	110 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2N47	1	0,009 kg
red	230 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2E48	1	0,009 kg
amber	230 VAC	20 mA	450...1120 mcd	Spring-type terminal	45-320.2F48	1	0,009 kg
yellow	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2G48	1	0,009 kg
green	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2H48	1	0,009 kg
blue	230 VAC	20 mA	280...710 mcd	Spring-type terminal	45-320.2J48	1	0,009 kg
white	230 VAC	20 mA	900...1400 mcd	Spring-type terminal	45-320.2N48	1	0,009 kg




Wiring diagram 1

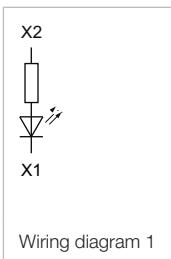
45 Accessories

Illumination element PCB mounting

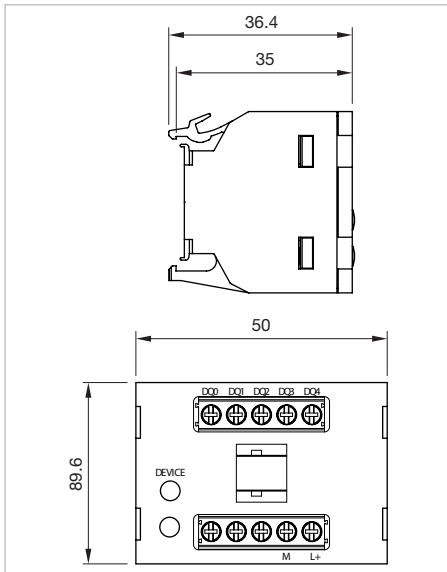


Dimensions [mm]
 X = Screw terminal,
 SP = Spring-type terminal


LED colour	Operating voltage	Operation current	Lumi. intensity	Terminal	Part No.	Wiring diagram	Weight
 <p style="text-align: center;">Illumination element</p>							
red	5 VDC	20 mA	450...1120 mcd	PCB terminal	45-320.3E60	1	0,009 kg
amber	5 VDC	20 mA	450...1120 mcd	PCB terminal	45-320.3F60	1	0,009 kg
yellow	5 VDC	20 mA	900...1400 mcd	PCB terminal	45-320.3G60	1	0,009 kg
green	5 VDC	20 mA	900...1400 mcd	PCB terminal	45-320.3H60	1	0,009 kg
blue	5 VDC	20 mA	280...710 mcd	PCB terminal	45-320.3J60	1	0,009 kg
white	5 VDC	20 mA	900...1400 mcd	PCB terminal	45-320.3N60	1	0,009 kg



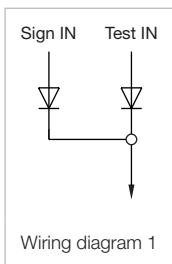
Electronic module



Dimensions [mm]

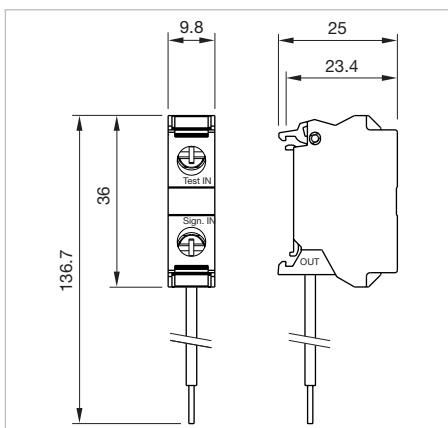
Product attribute	Operating voltage	Terminal	Part No.	Component layout	Wiring diagram	Weight
 <p>Electronic module</p>						
	Front plate mounting	24 VDC	Screw terminal	45-36F.1114	5	1

The component layouts you will find from page 156





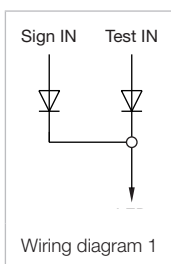
45 Accessories

Test module




Dimensions [mm]
 X = Screw terminal,
 SP = Spring-type terminal

Product attribute	Operating voltage	Terminal	Part No.	Wiring diagram	Weight
 Test module front mounting					
Front mounting	12-240 VAC/DC	Screw terminal	45-330.1115	1	0,011 kg
 Test module base mounting					
Base mounting	12-240 VAC/DC	Screw terminal	45-330.2115	1	0,011 kg



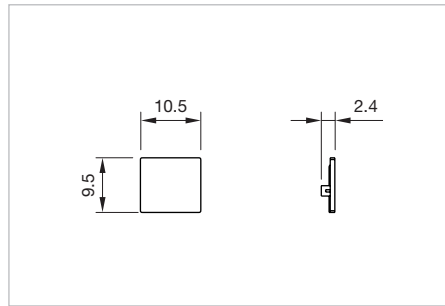
Extension plungers

Product attribute	Material	Colour	Part No.	Weight
 Extension plungers				
for pushbutton with extended stroke	Plastic	black	45-50M.1900	0,009 kg


Legend plate for switching elements

Additional Information

- Without inscription
- In support of the dust resistance



Dimensions [mm]

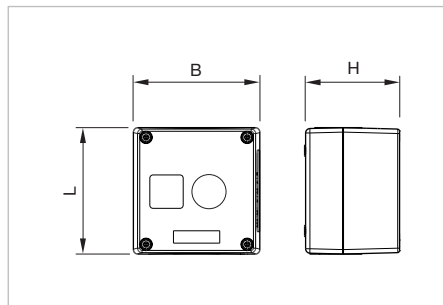
Product attribute	Dimension	Material	Colour	Part No.	Weight
 <p>Legend plate</p>					
For snapping in place	10.5 x 9.5 mm	Plastic	white	45-523.1900	0,001 kg

Mounting







Enclosure, IP66, IP67, IP69K





Additional Information

- Openings for cable gland M16 or M20




Dimensions [mm]

Product attribute	Dimension	Material	Colour	Part No.	Weight
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm	L 85 x B 85 x H 64 mm	Plastic	grey	45-430.1801	0,251 kg
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm	L 85 x B 85 x H 64 mm	Plastic	yellow	45-410.1401	0,248 kg
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 89.4 x B 85 x H 64 mm	Metal	yellow	45-410.2403	0,478 kg
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 89.4 x B 85 x H 64 mm	Metal	grey	45-430.2803	0,479 kg
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm, with protective shroud	L 85 x B 85 x H 64 mm	Plastic	yellow	45-420.1401	0,287 kg
	L 85 x B 85 x H 64 mm	Metal	yellow	45-420.2403	0,287 kg
 <p>Enclosure</p>					
1 mounting hole Ø 22.3 mm, with protective shroud, for base mounting, top and bottom 1 x M20	L 89.4 x B 85 x H 64 mm	Metal	grey	45-420.2803	0,568 kg







Product attribute	Dimension	Material	Colour	Part No.	Weight
 <p>Enclosure</p>					
2 mounting holes Ø 22.3 mm	L 114 x B 85 x H 64 mm	Plastic	grey	45-440.1801	0,299 kg
2 mounting holes Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 118 x B 85 x H 64 mm	Metal	grey	45-440.2803	0,299 kg
 <p>Enclosure</p>					
3 mounting holes Ø 22.3 mm	L 154 x B 85 x H 64 mm	Plastic	grey	45-450.1801	0,364 kg
3 mounting holes Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 158 x B 85 x H 64 mm	Metal	grey	45-450.2803	0,683 kg
 <p>Enclosure</p>					
4 mounting holes Ø 22.3 mm	L 194 x B 85 x H 64 mm	Plastic	grey	45-460.1802	0,436 kg
4 mounting holes Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 199 x B 85 x H 64 mm	Metal	grey	45-460.2804	0,799 kg
 <p>Enclosure</p>					
6 mounting holes Ø 22.3 mm	L 280 x B 85 x H 64 mm	Plastic	grey	45-470.1802	0,602 kg
6 mounting holes Ø 22.3 mm, for base mounting, top and bottom 1 x M20	L 285 x B 85 x H 64 mm	Metal	grey	45-470.2804	1,081 kg

Cable gland, IP66, IP67, IP69K


Thread	Material	Colour	Part No.	Weight
 <p>Cable gland</p>				
M20	Plastic	black	45-507.1100	0,016 kg
M25	Plastic	black	45-509.1100	0,022 kg

45 Accessories

Connection piece, IP68

Product attribute	Thread	Material	Colour	Part No.	Weight
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M20/M20	Plastic	black	45-50C.1900	0,050 kg
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M20/M25	Plastic	black	45-50D.1900	0,055 kg
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M25/M25	Plastic	black	45-50E.1900	0,060 kg
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M20/M20	Metal	silver	45-50C.2900	0,055 kg
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M20/M25	Metal	silver	45-50D.2900	0,075 kg
 <p>Connection piece</p>					
for connecting 2 enclosures, with hexagonal nut	M25/M25	Metal	silver	45-50E.2900	0,077 kg

Enclosure cover monitoring

Product attribute	Material	Colour	Part No.	Weight
 <p>Enclosure cover monitoring</p>				
with extension plungers	Plastic	black	45-50G.0900	0,007 kg

Adapter for reduction of 30.5 mm to 22.3 mm, IP66, IP67, IP69K

Product attribute	Material	Part No.	Weight
 Adapter for reduction of 30.5 mm to 22.3 mm			
with seal	Metal	45-501.2000	0,034 kg

45 Drawings

Drawings

Component layout 1

Component layout 2

Component layout 3

Component layout 4

Arrangement switching element corresponds to designation of front adaptor

1	3	2
---	---	---

Switching action

green (white) button pressed

red (black) button pressed

Switching element

DQ0 DQ1 DQ2 DQ3 DQ4

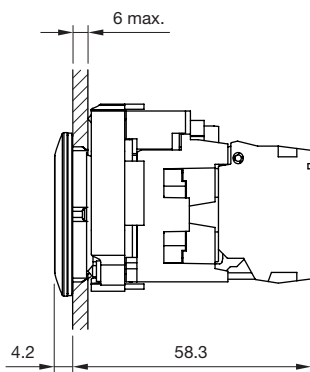
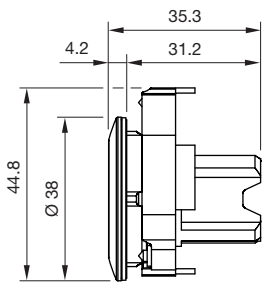
Device

M L+

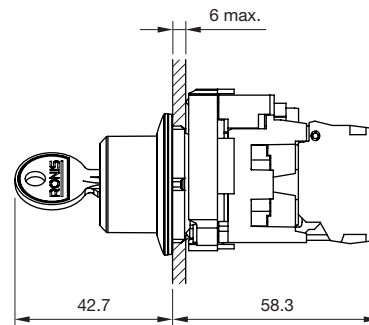
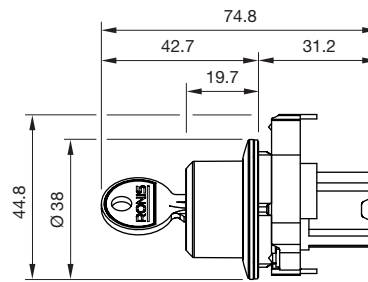
Component layout 5

Dimensions incl. mounting depth of 3 or 4 elements

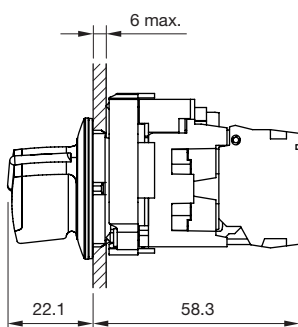
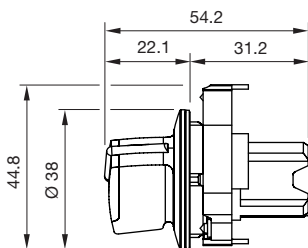
Indicator, Pushbutton, Illuminated pushbutton (flush design)



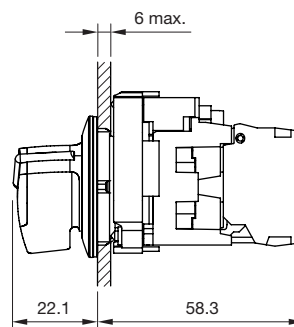
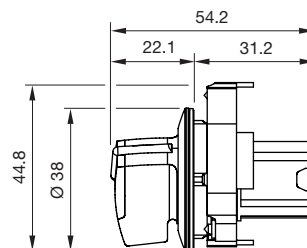
Keylock switch (flush design)



Selector switch short lever (flush design)

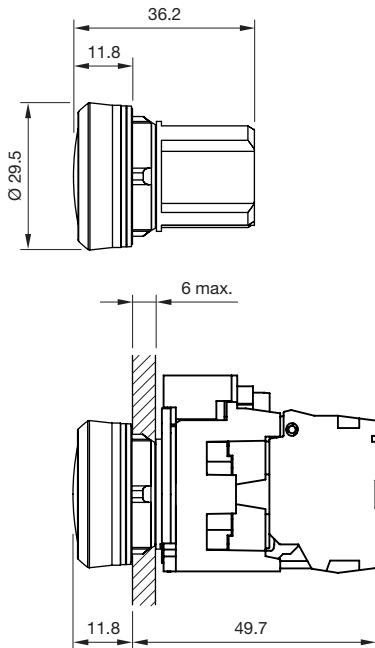


Selector switch long lever (flush design)

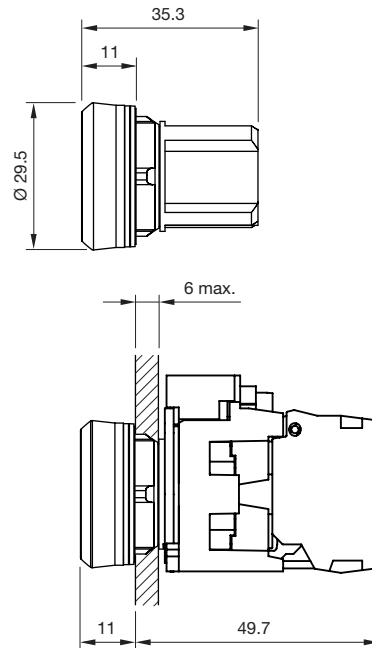


45 Drawings

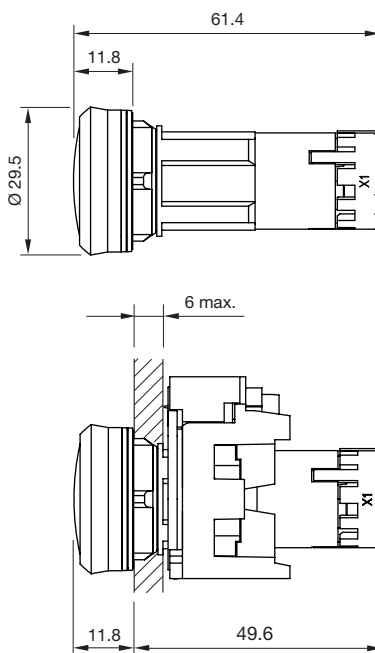
Indicator full face illumination (raised design)



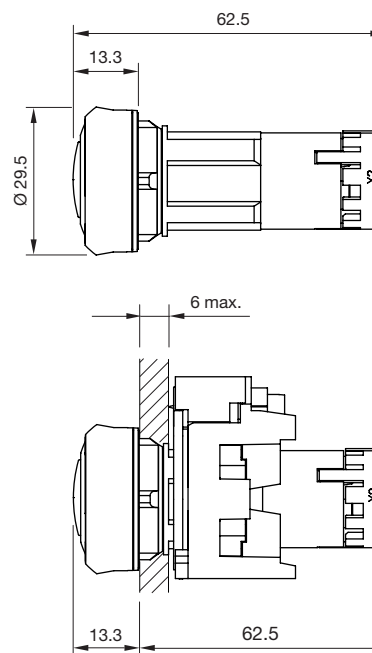
Indicator front illumination, Pushbutton, Illuminated pushbutton, Lens level with front ring (raised design)



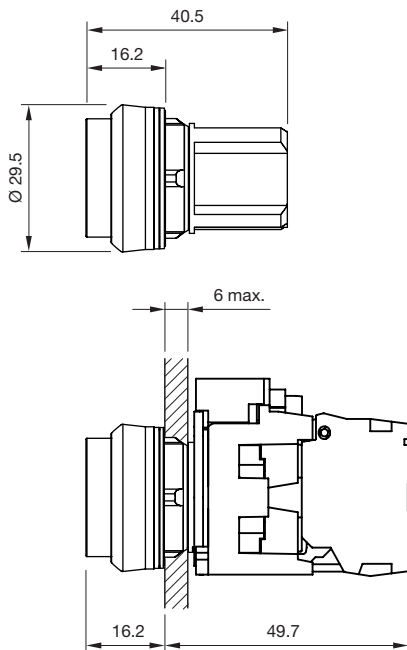
Duo indicator



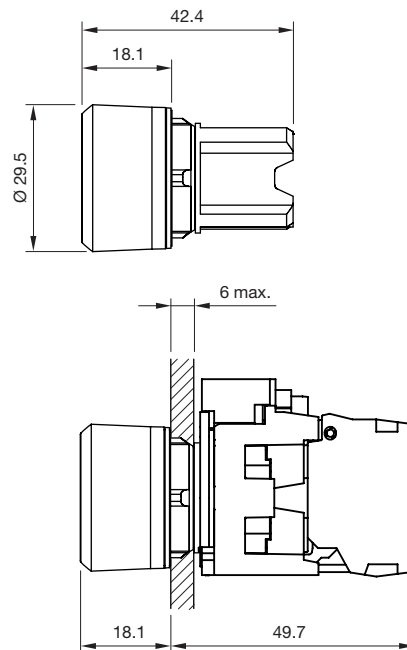
Buzzer



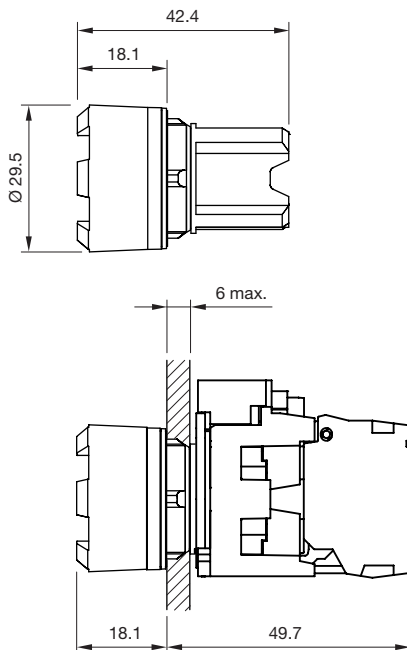
Pushbutton, Illuminated pushbutton, lens raised above front ring (raised design)



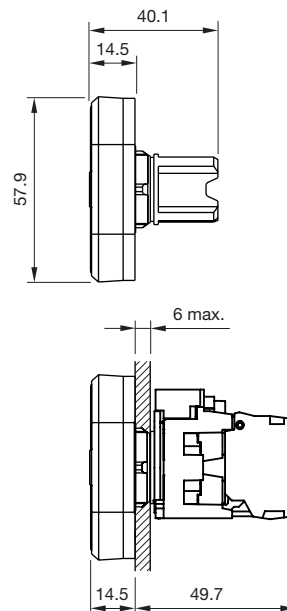
Pushbutton, lens lower than front ring (raised design)



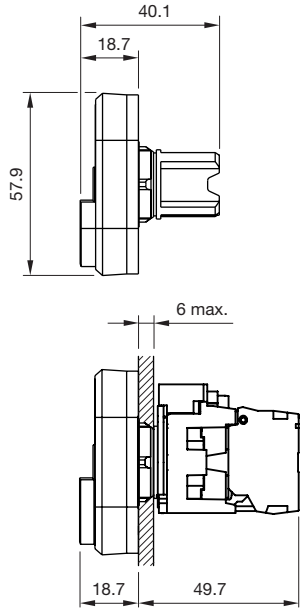
Pushbutton, Illuminated pushbutton, lens lower than front ring, with castellation (raised design)



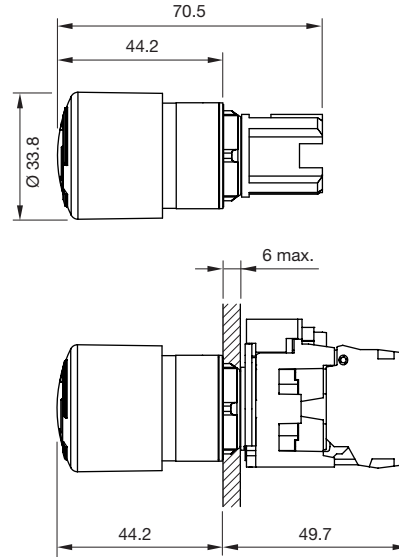
Double pushbutton, Lens level with front ring (raised design)



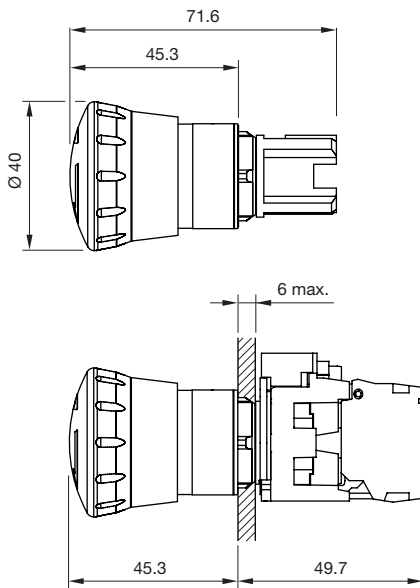
Double pushbutton, level with/raised above front ring (raised design)



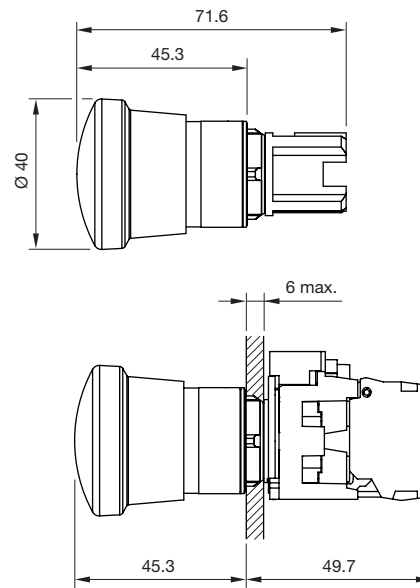
Emergency stop switch Ø 33.8 mm (raised design)



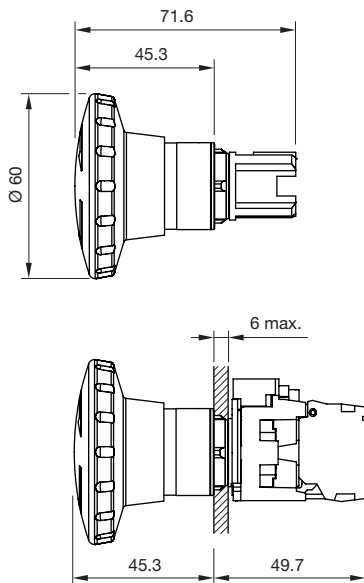
Emergency stop switch, Stop switch Ø 40 mm (raised design)



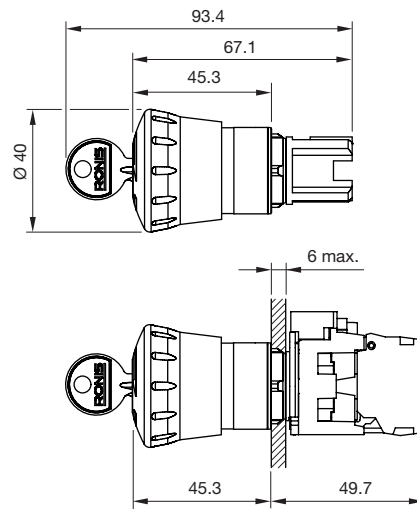
Emergency stop switch, Stop switch Ø 40 mm (raised design)



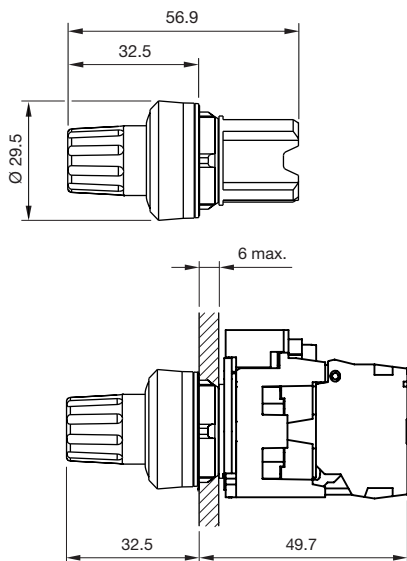
Emergency stop switch \varnothing 60 mm (raised design)



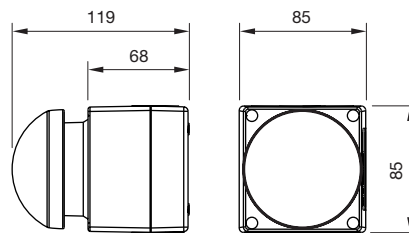
Emergency stop switch with key \varnothing 40 mm (raised design)



Stop switch \varnothing 29.5 mm (raised design)

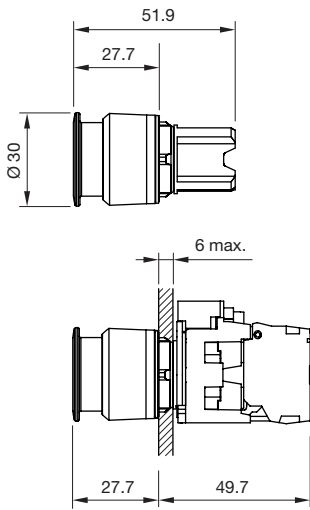


Palm switch

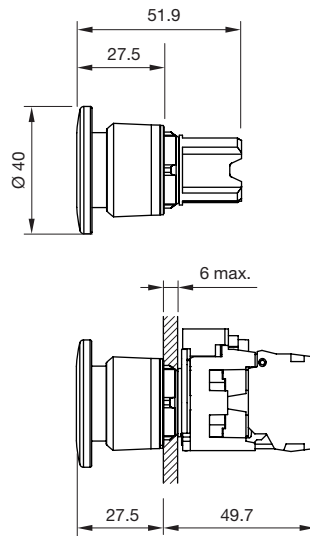


45 Drawings

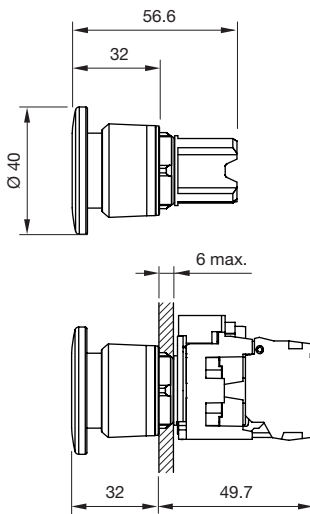
Mushroom-head pushbutton \varnothing 30 mm (raised design)



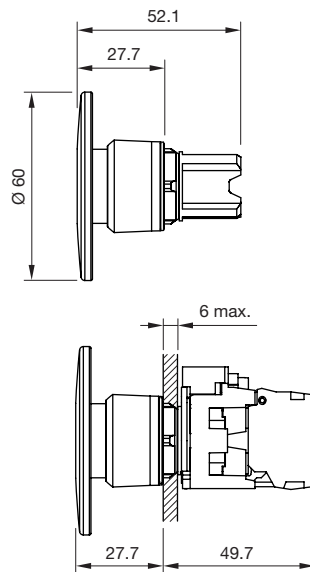
Mushroom-head pushbutton Momentary, Maintain, \varnothing 40 mm (raised design)



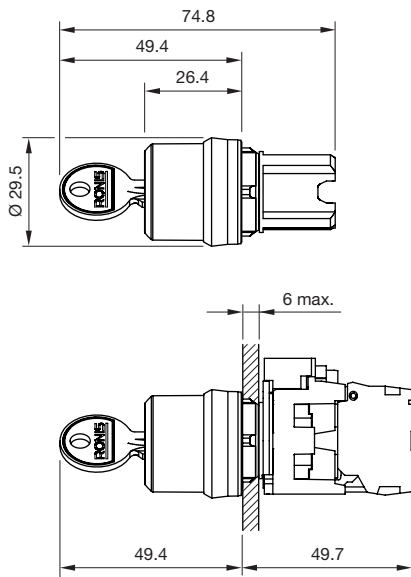
Mushroom-head pushbutton Momentary/Maintain, Momentary/Momentary, \varnothing 40 mm (raised design)



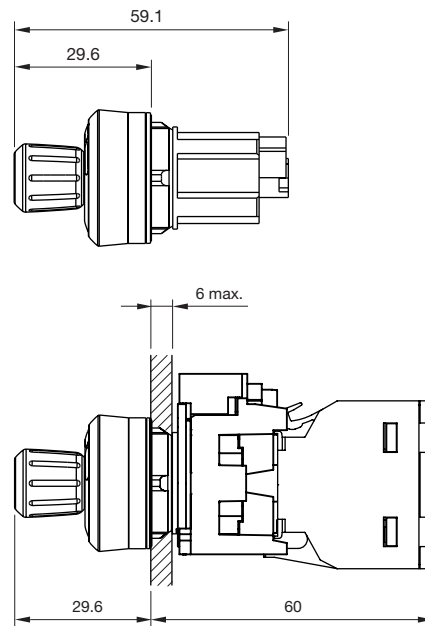
Mushroom-head pushbutton \varnothing 60 mm (raised design)



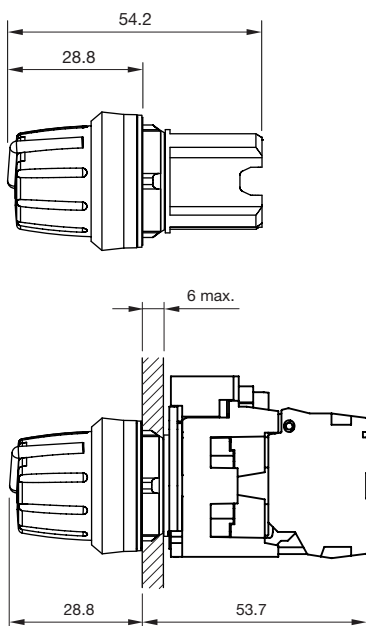
Keylock switch (raised design)



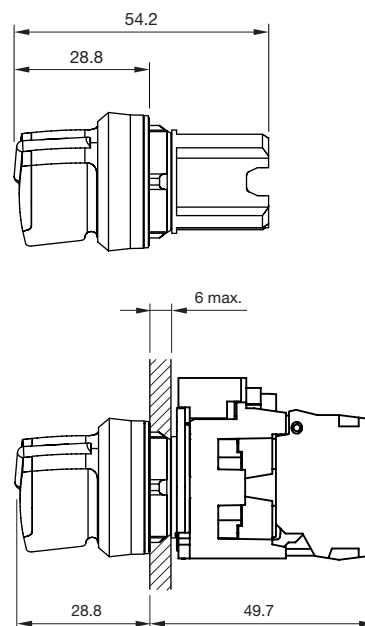
ID keylock switch (raised design)



Selector switch, round lever (raised design)



Selector switch, short lever (raised design)



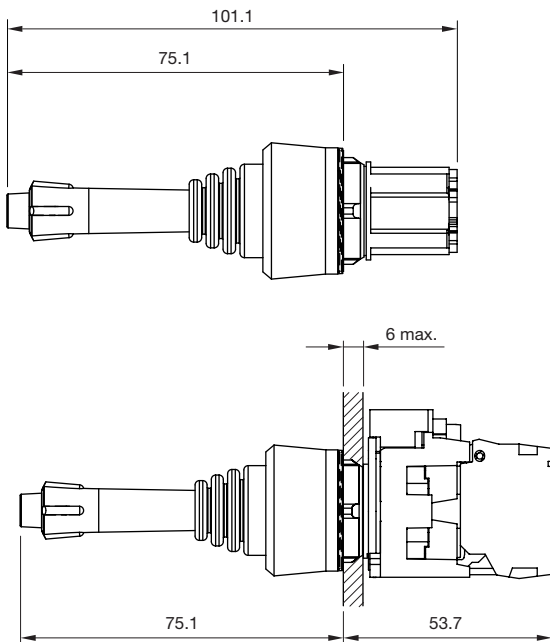
Selector switch, long lever (raised design)



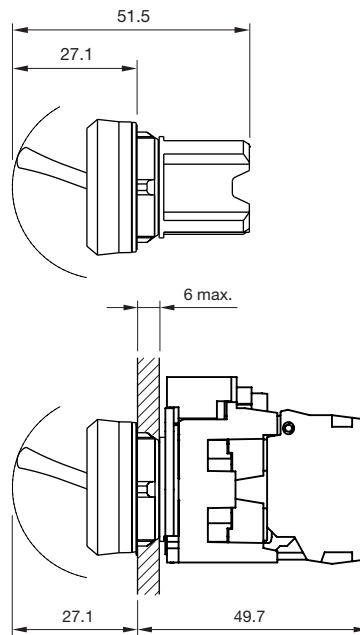
Potentiometer (raised design)



Toggle stick (raised design)



Toggle switch (raised design)



Indicator actuator
Material
Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics
Vibration resistance

according to IEC 60068-2-6

2 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Environmental conditions
Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3K6, 3C3, 3S2, 3M6

Duo Indicator
Material
Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics
Terminal

Screw terminal

- Solid without end sleeves 2 x (1.0 ... 1.5 mm²)
- Solid with end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded without end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded with end sleeves 2 x (0.5 ... 1.5 mm²)
- For AWG cables for auxiliary contacts 2 x (18 ... 14)

Tightening torque

Screw terminal 0.8 ... 1 Nm

Vibration resistance

according to IEC 60068-2-6

10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Electrical characteristics
Insulation voltage

Rated value 320 V

Pollution degree

3

Surge voltage resistance

Rated value 4 kV

Operating voltage

at AC/DC

- Rated value 6 ... 24 V

at AC

- Rated value 110 or 230 V

Environmental conditions
Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3B2, 3K6, 3S2, 3M6

Buzzer

Material

Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics

Terminal

Screw terminal

- Solid without end sleeves 2 x (1.0 ... 1.5 mm²)
- Solid with end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded without end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded with end sleeves 2 x (0.5 ... 1.5 mm²)
- For AWG cables for auxiliary contacts 2 x (18 ... 14)

Tightening torque

Screw terminal 0.8 ... 1 Nm

Vibration resistance

according to IEC 60068-2-6

10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g / 11 ms

Electrical characteristics

Insulation voltage

Rated value 320 V

Pollution degree

3

Surge voltage resistance

Rated value 4 kV

Operating voltage

at AC

- Rated value 24 ... 24 V

at AC

- Rated value 24 ... 24 V

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP40

Environmental category

during operation according to IEC 60721:

3B2, 3K6, 3S2, 3M6

Pushbutton actuator
Material
Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics
Operating frequency

Lens flat/level with front bezel:

- Momentary max. 3 600/h
- Maintain max. 1 800/h

Lens flat/raised above front ring:

- Momentary max. 3 600/h
- Maintain max. 1 800/h

Lens flat/lower than front ring:

- Momentary max. 3 600/h

Lens flat/lower than front ring, with castellation:

- Momentary max. 3 600/h

Mechanical lifetime

Lens flat/level with front bezel:

- Momentary 10 000 000 switching cycles
- Maintain 500 000 switching cycles

Lens flat/raised above front ring:

- Momentary 10 000 000 switching cycles
- Maintain 500 000 switching cycles

Lens flat/lower than front ring:

- Momentary 10 000 000 switching cycles

Lens flat/lower than front ring, with castellation:

- Momentary 10 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6

20 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Environmental conditions
Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3K6, 3C3, 3S2, 3M6

45 Technical data

Double pushbutton actuator, Double pushbutton actuator illuminated

Material

Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics

Operating frequency

max. 3 600/h

Mechanical lifetime

2 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6, 2B2

Illuminated pushbutton actuator

Material

Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics

Operating frequency

Lens flat/level with front bezel:
- Momentary max. 3 600/h
- Maintain max. 1 800/h
Lens flat/raised above front ring:
- Momentary max. 3 600/h
Lens flat/lower than front ring, with castellation:
- Momentary max. 3 600/h

Mechanical lifetime

Lens flat/level with front bezel:
- Momentary 3 000 000 switching cycles
- Maintain 500 000 switching cycles
Lens flat/raised above front ring:
- Momentary 3 000 000 switching cycles
Lens flat/lower than front ring, with castellation:
- Momentary 3 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
20 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Emergency stop switch actuator

Material

Actuator element

Plastic red

Actuator housing

Plastic or metal

Mechanical characteristics

Type of unlocking device

Twist to release, pull release or key to release

Operating frequency

max. 600/h

Mechanical lifetime

300 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
2 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Stop switch actuator

Material

Actuator element

Plastic red

Actuator housing

Plastic or metal

Mechanical characteristics

Type of unlocking device

Twist to release

Operating frequency

max. 600/h

Mechanical lifetime

300 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
2 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Palm switch

Material

Actuator element

Plastic or metal, red or black

Actuator housing

Plastic or metal

Mechanical characteristics

Type of unlocking device

Pull to release

Vibration resistance

according to IEC 60068-2-6

10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Electrical characteristics

Operating voltage

at AC

- Rated value 5 ... 500 V

bei DC

- Rated value 5 ... 500 V

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3K6, 3C3, 3S2, 3M6, 3B2

Mushroom-head pushbutton actuator

Material

Actuator element

Plastic

Actuator housing

Plastic or metal

Mechanical characteristics

Type of unlocking device

Pull release

Operating frequency

- Momentary max. 3 600/h

- Maintain max. 1 800/h

Mechanical lifetime

- Momentary 10 000 000 switching cycles

- Maintain 500 000 switching cycles

Vibration resistance

according to IEC 60068-2-6

20 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3K6, 3C3, 3S2, 3M6

Keylock switch actuator
Material
Actuator element

Metal

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics
Operating frequency

max. 1800/h

Mechanical lifetime

1 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6

10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27

Sinusoidal half-wave 50 g /11 ms

Environmental conditions
Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:

3K6, 3C3, 3S2, 3M6

ID keylock switch
Material
Actuator element

Plastic

Front ring

Plastic or metal

Actuator housing

Plastic

Number of NO contacts

5

ID-Key

Authorization level

Key colour

1

green

1+2

yellow

1+2+3

red

1+2+3+4

blue

Mechanical characteristics
Terminals

Screw terminal front mounting

- Solid with end sleeves

 1 x (0.2 ... 2.5 mm²), 2 x (0.2 ... 0.75 mm²)

- Solid without end sleeves

 1 x (0.2 ... 2.5 mm²), 2 x (0.2 ... 0.75 mm²)

- Finely stranded with end sleeves

 1 x (0.2 ... 2.5 mm²), 2 x (0.25 ... 0.75 mm²)

- Finely stranded with end sleeves

 1 x (0.2 ... 2.5 mm²), 2 x (0.2 ... 0.75 mm²)

- For AWG cables

1 x (24 ... 14), (24 ... 19)

Tightening torque

Screw terminal

0.35 ... 0.4 Nm

Mechanical lifetime
Electrical characteristics
Operating voltage

24 VDC

Environmental conditions
Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP65

Environmental category

during operation according to IEC 60721:

3M6, 3S2, 3B2, 3C3, 3K6 (with relative air humidity of 10 ... 95 %)

Selector switch actuator

Material

Actuator element

Round lever, plastic, illuminable
Short lever, plastic, illuminable
Long lever, plastic, illuminable

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics

Operating frequency

max. 1800/h

Mechanical lifetime

1 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Potentiometer

Material

Actuator element

Round lever, plastic

Front ring

Plastic or metal

Actuator housing

Plastic or metal

Mechanical characteristics

Terminals

Screw terminal
- Solid 2 x (1.0 ... 1.5 mm²)
- With end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded
- Without end sleeves 2 x (0.5 ... 0.75 mm²)
- With end sleeves 2 x (0.5 ... 1.5 mm²)
- For AWG cables for auxiliary contacts 2 x (18 ... 14)

Tightening torque

0.8 ... 1 Nm

Operating frequency

max. 1 800/h

Mechanical lifetime

25 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
10 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Slewing range

275° ±2°

Electrical characteristics

Active power consumption

0.5 W

Insulation voltage

Rated value 500 V

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

IP66, IP67, IP69K

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Toggle stick actuator

Material

Actuator element
Plastic

Front ring
Plastic or metal

Actuator housing
Plastic or metal

Mechanical characteristics

Operating frequency
3 600/h

Mechanical lifetime
Momentary: 250 000 switching cycles per direction of actuation
Maintain: 100 000 switching cycles per direction of actuation

Vibration resistance
according to IEC 60068-2-6
10 ... 500 Hz: 5 g

Shock resistance
according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

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

Storage temperature
-40 °C ... +80 °C

Protection degree
IP65, IP67

Environmental category
during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Toggle switch actuator

Material

Actuator element
Plastic

Front ring
Plastic or metal

Actuator housing
Plastic or metal

Mechanical characteristics

Operating frequency
max. 1 800/h

Mechanical lifetime
1 000 000 switching cycles

Vibration resistance
according to IEC 60068-2-6
10 ... 500 Hz: 5 g

Shock resistance
according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Environmental conditions

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

Storage temperature
-40 °C ... +80 °C

Protection degree
IP66, IP67, IP69K

Environmental category
during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Slow-make switching element

Switching system

The double-break, slow-make switching element is equipped with normally open or normally closed contact. The normally closed contact has forced opening. Slow-make contacts with forced action are ideal for high switch ratings. Up to six switching elements can be snapped to each holder.

The NC contact opens automatically upon disconnection of the actuator. On delivery, the contact is open (= safe state). Activation (= NC contacts on the non-actuated commanding device are closed) takes place upon first-time actuation after the contact block is snapped onto the actuator.

Material

Material of contact

Silver alloy

Housing

Plastic

Mechanical characteristics

Terminals

Screw terminal

- Solid 2 x (1.0 ... 1.5 mm²)
- With end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded
- Without end sleeves 2 x (0.5 ... 0.75 mm²)
- With end sleeves 2 x (0.5 ... 1.5 mm²)
- For AWG cables for auxiliary contacts 2 x (18 ... 14)

Spring-type terminal (SP)

- Solid 2 x (0.25 ... 1.5 mm²)
- Finely stranded
- Without end sleeves 2 x (0.5 ... 1.5 mm²)
- With end sleeves 2 x (0.5 ... 0.75 mm²)
- For AWG cables for auxiliary contacts 2 x (24 ... 16)

Tightening torque

Screw terminal, spring-type terminal 0.8 ... 0.9 Nm

Operating frequency

max. 3 600/h

Mechanical lifetime

10 000 000 switching cycles

Vibration resistance

according to IEC 60068-2-6
2 ... 500 Hz: 5 g

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Electrical characteristics

Standards

The switches comply with the "Standards for low-voltage switching devices" EN IEC 60947-5-1

Thermal current

10 A

Insulation voltage

Rated value 500 V

Pollution degree

3

Surge voltage resistance

Rated value 6 kV

Contact reliability

One contact failure per 100 million switching operations (17 V, 5 mA)

One contact failure per 10 million switching operations (5 V, 1 mA)

Operating voltage

at AC

- Rated value 5 ... 500 V

at DC

- Rated value 5 ... 500 V

Operating current

at AC-12

Voltage	24 V	230 V	500 V
Current	10 A	10 A	10 A

at AC-15

Voltage	24V	230 V	400 V	500 V
Current	6 A	6 A	3 A	1.4 A

at DC-12

Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	10 A	5 A	2.5 A	1 A	0.3 A	0.2 A

at DC-13

Voltage	24 V	48 V	110 V	230 V	400 V	500 V
Current	3 A	1.5 A	0.7 A	0.3 A	0.1 A	0.07 A

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

Housing IP40

Terminal IP20

Environmental category

during operation according to IEC 60721:

Approvals

Approbations

CCC
CSA
UL

Declaration of conformity

CE

Illumination element

Material

Housing

Plastic

Mechanical characteristics

Terminals

Screw terminal

- Solid 2 x (1.0 ... 1.5 mm²)
- With end sleeves 2 x (0.5 ... 0.75 mm²)
- Finely stranded
- Without end sleeves 2 x (0.5 ... 0.75 mm²)
- With end sleeves 2 x (0.5 ... 1.5 mm²)
- For AWG cables for auxiliary contacts 2 x (18 ... 14)

Spring-type terminal (SP)

- Solid 2 x (0.25 ... 1.5 mm²)
- Finely stranded
- Without end sleeves 2 x (0.5 ... 1.5 mm²)
- With end sleeves 2 x (0.5 ... 0.75 mm²)
- For AWG cables for auxiliary contacts 2 x (24 ... 16)

Tightening torque

Screw terminal, spring-type terminal 0.8 ... 0.9 Nm

Shock resistance

according to IEC 60068-2-27
Sinusoidal half-wave 50 g /11 ms

Vibration resistance

according to IEC 60068-2-6
2 ... 500 Hz: 5 g

Electrical characteristics

Standards

The switches comply with the "Standards for low-voltage switching devices" EN IEC 60947-5-1

Electrical life

100 000 h

Insulation voltage

Rated value 320 V

Surge voltage resistance

Rated value 4 kV

Environmental conditions

Operating temperature

-25 °C ... +70 °C

Storage temperature

-40 °C ... +80 °C

Protection degree

Terminal IP20

Environmental category

during operation according to IEC 60721:
3K6, 3C3, 3S2, 3M6

Approvals

Approbations

CCC
CSA
UL

Declaration of conformity

CE

EAO reserves the right to alter specifications without further notice.

Inscription marking plates and legend plates

Labels can be inserted for identification purposes in illuminated pushbuttons and pushbuttons with a flat lens. This marking plates are made of translucent plastic with a black inscription, which can be fitted in any 90° angle.

Standard texts for marking plates

Example		Part No. 45-563.0K00.T00029
----------------	---	-----------------------------

Standard texts German		Standard texts English	
Ein	Part No. 45-563.0K00.T00001	On	Part No. 45-563.0K00.T00020
Aus	Part No. 45-563.0K00.T00002	Off	Part No. 45-563.0K00.T00021
Auf	Part No. 45-563.0K00.T00003	Up	Part No. 45-563.0K00.T00022
Ab	Part No. 45-563.0K00.T00004	Down	Part No. 45-563.0K00.T00023
Vor	Part No. 45-563.0K00.T00005	Forward	Part No. 45-563.0K00.T00024
Zurück	Part No. 45-563.0K00.T00006	Right	Part No. 45-563.0K00.T00026
Rechts	Part No. 45-563.0K00.T00007	Left	Part No. 45-563.0K00.T00027
Links	Part No. 45-563.0K00.T00008	Stop	Part No. 45-563.0K00.T00028
Halt	Part No. 45-563.0K00.T00009	Start	Part No. 45-563.0K00.T00029
Zu	Part No. 45-563.0K00.T00010	Reset	Part No. 45-563.0K00.T00030
Schnell	Part No. 45-563.0K00.T00011	Test	Part No. 45-563.0K00.T00031
Langsam	Part No. 45-563.0K00.T00012	Open	Part No. 45-563.0K00.T00032
Betrieb	Part No. 45-563.0K00.T00013	Close	Part No. 45-563.0K00.T00033
Störung	Part No. 45-563.0K00.T00014	Running	Part No. 45-563.0K00.T00035
Einrichten	Part No. 45-563.0K00.T00018	Fast	Part No. 45-563.0K00.T00044
		Slow	Part No. 45-563.0K00.T00045

Symbols for marking plates

Graphic symbols are according to ISO 7000 or IEC 60417.

 Part No. 45-563.0K00.S00001	 Part No. 45-563.0K00.S00012 Decrease, Minus	 Part No. 45-563.0K00.S00023 Unlock
 Part No. 45-563.0K00.S00002	 Part No. 45-563.0K00.S00013 Electric motor	 Part No. 45-563.0K00.S00024 Setting
 Part No. 45-563.0K00.S00003	 Part No. 45-563.0K00.S00014 Horn	 Part No. 45-563.0K00.S00025 On-Off momentary contact type
 Part No. 45-563.0K00.S00004	 Part No. 45-563.0K00.S00015 Water tap	 Part No. 45-563.0K00.S00026 Manual operating
 Part No. 45-563.0K00.S00005 Arrow direction to right	 Part No. 45-563.0K00.S00016 Pump	 Part No. 45-563.0K00.S00027 Automatic cycle
 Part No. 45-563.0K00.S00006 Arrow direction up	 Part No. 45-563.0K00.S00017 Coolant pump	 Part No. 45-563.0K00.S00028 Suction
 Part No. 45-563.0K00.S00007 Clockwise rotation	 Part No. 45-563.0K00.S00018 Lock, tighten	 Part No. 45-563.0K00.S00029 Blowing
 Part No. 45-563.0K00.S00008 Counterclockwise rotation	 Part No. 45-563.0K00.S00019 Unlock, unclamp	
 Part No. 45-563.0K00.S00009 Rapid traverse	 Part No. 45-563.0K00.S00020 Brake	
 Part No. 45-563.0K00.S00010 Feed	 Part No. 45-563.0K00.S00021 Release brake	
 Part No. 45-563.0K00.S00011 Increase, Plus	 Part No. 45-563.0K00.S00022 Interlock	

Customized inscription for marking plates

All dimensions in mm

Height of letters h	Number of lines	Number of letters per line (target value)		
		b1	b2	b3
4	1	10	-	-
3	2	-	8	-
	3	10	-	6



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






Standard texts for legend plates black, 27 x 12.5 mm

Example	Reset	Part No. 45-573.1102.T00030
----------------	--------------	-----------------------------

Standard texts German		Standard texts English		Standard texts French	
Ein	Part No. 45-573.1102.T00001	On	Part No. 45-573.1102.T00020	Marche	Part No. 45-573.1102.T00048
Aus	Part No. 45-573.1102.T00002	Off	Part No. 45-573.1102.T00021	Arrêt	Part No. 45-573.1102.T00049
Auf	Part No. 45-573.1102.T00003	Up	Part No. 45-573.1102.T00022	Montée	Part No. 45-573.1102.T00050
Ab	Part No. 45-573.1102.T00004	Down	Part No. 45-573.1102.T00023	Descente	Part No. 45-573.1102.T00051
Vor	Part No. 45-573.1102.T00005	Forward	Part No. 45-573.1102.T00024	Avant	Part No. 45-573.1102.T00052
Zurück	Part No. 45-573.1102.T00006	Reverse	Part No. 45-573.1102.T00025	Retour	Part No. 45-573.1102.T00053
Rechts	Part No. 45-573.1102.T00007	Right	Part No. 45-573.1102.T00026	Droite	Part No. 45-573.1102.T00054
Links	Part No. 45-573.1102.T00008	Left	Part No. 45-573.1102.T00027	Gauche	Part No. 45-573.1102.T00055
Halt	Part No. 45-573.1102.T00009	Stop	Part No. 45-573.1102.T00028	Ouvert	Part No. 45-573.1102.T00056
Zu	Part No. 45-573.1102.T00010	Start	Part No. 45-573.1102.T00029	Fermé	Part No. 45-573.1102.T00057
Betrieb	Part No. 45-573.1102.T00013	Reset	Part No. 45-573.1102.T00030	Rapide	Part No. 45-573.1102.T00058
Störung	Part No. 45-573.1102.T00014	Test	Part No. 45-573.1102.T00031	En Service	Part No. 45-573.1102.T00059
Hand Auto	Part No. 45-573.1102.T00015	Open	Part No. 45-573.1102.T00032	Default	Part No. 45-573.1102.T00060
Hand O Auto	Part No. 45-573.1102.T00017	Close	Part No. 45-573.1102.T00033	Reglage	Part No. 45-573.1102.T00061
Einrichten	Part No. 45-573.1102.T00018	Jog	Part No. 45-573.1102.T00034	Arrêt d'urgence	Part No. 45-573.1102.T00062
		Running	Part No. 45-573.1102.T00035	Hors service	Part No. 45-573.1102.T00063
		Fault	Part No. 45-573.1102.T00036	Sous tension	Part No. 45-573.1102.T00064
		Run	Part No. 45-573.1102.T00037	Manu Auto	Part No. 45-573.1102.T00065
		Stop Start	Part No. 45-573.1102.T00038	Marche Arrêt	Part No. 45-573.1102.T00066
		Off On	Part No. 45-573.1102.T00039	Rearmement	Part No. 45-573.1102.T00067
		Power off	Part No. 45-573.1102.T00040		
		Power on	Part No. 45-573.1102.T00041		
		Man O Auto	Part No. 45-573.1102.T00042		
		Man Auto	Part No. 45-573.1102.T00043		

Symbols for legend plates black, 27 x 12.5 mm

Graphic symbols are according to ISO 7000 or IEC 60417.

	Part No. 45-573.1102.S00001		Part No. 45-573.1102.S00007
	Part No. 45-573.1102.S00002		Part No. 45-573.1102.S00009 Arrow/Direction up
	Part No. 45-573.1102.S00005		










Standard texts for legend plates silver, 27 x 12.5 mm

Example	Reset	Part No. 45-573.1A02.T00030
----------------	--------------	-----------------------------

Standard texts German		Standard texts English	
Ein	Part No. 45-573.1A02.T00001	On	Part No. 45-573.1A02.T00020
Aus	Part No. 45-573.1A02.T00002	Off	Part No. 45-573.1A02.T00021
Auf	Part No. 45-573.1A02.T00003	Up	Part No. 45-573.1A02.T00022
Ab	Part No. 45-573.1A02.T00004	Down	Part No. 45-573.1A02.T00023
Vor	Part No. 45-573.1A02.T00005	Stop	Part No. 45-573.1A02.T00028
Zurück	Part No. 45-573.1A02.T00006	Start	Part No. 45-573.1A02.T00029
Rechts	Part No. 45-573.1A02.T00007	Reset	Part No. 45-573.1A02.T00030
Links	Part No. 45-573.1A02.T00008	Test	Part No. 45-573.1A02.T00031
Halt	Part No. 45-573.1A02.T00009	Open	Part No. 45-573.1A02.T00032
Zu	Part No. 45-573.1A02.T00010	Close	Part No. 45-573.1A02.T00033
Schnell	Part No. 45-573.1A02.T00011	Man O Auto	Part No. 45-573.1A02.T00042
Langsam	Part No. 45-573.1A02.T00012	Man Auto	Part No. 45-573.1A02.T00043
Betrieb	Part No. 45-573.1A02.T00013	Running	Part No. 45-573.1A02.T00035
Störung	Part No. 45-573.1A02.T00014	Fault	Part No. 45-573.1A02.T00036
Hand Auto	Part No. 45-573.1A02.T00015	Fast	Part No. 45-573.1A02.T00044
Stop Start	Part No. 45-573.1A02.T00016	Slow	Part No. 45-573.1A02.T00045
Hand O Auto	Part No. 45-573.1A02.T00017		

Symbols for legend plates silver, 27 x 12.5 mm

Graphic symbols are according to ISO 7000 or IEC 60417.

	Part No. 45-573.1A02.S00001		Part No. 45-573.1A02.S00006
	Part No. 45-573.1A02.S00002		Part No. 45-573.1A02.S00007
	Part No. 45-573.1A02.S00003		Part No. 45-573.1A02.S00008 Arrow/Direction right
	Part No. 45-573.1A02.S00004		Part No. 45-573.1A02.S00009 Arrow/Direction up
	Part No. 45-573.1A02.S00005		






Standard texts for legend plates black, 27 x 17.5 mm

Example		Part No. 45-573.1103.T00028
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Standard texts German		Standard texts English		Standard texts French	
Ein	Part No. 45-573.1103.T00001	On	Part No. 45-573.1103.T00020	Marche	Part No. 45-573.1103.T00048
Aus	Part No. 45-573.1103.T00002	Off	Part No. 45-573.1103.T00021	Arrêt	Part No. 45-573.1103.T00049
Auf	Part No. 45-573.1103.T00003	Up	Part No. 45-573.1103.T00022	Droite	Part No. 45-573.1103.T00054
Ab	Part No. 45-573.1103.T00004	Down	Part No. 45-573.1103.T00023	Gauche	Part No. 45-573.1103.T00055
Vor	Part No. 45-573.1103.T00005	Forward	Part No. 45-573.1103.T00024	En Service	Part No. 45-573.1103.T00059
Zurück	Part No. 45-573.1103.T00006	Reverse	Part No. 45-573.1103.T00025	Defaut	Part No. 45-573.1103.T00060
Halt	Part No. 45-573.1103.T00009	Right	Part No. 45-573.1103.T00026	Sous tension	Part No. 45-573.1103.T00064
Zu	Part No. 45-573.1103.T00010	Stop	Part No. 45-573.1103.T00028	Manu Auto	Part No. 45-573.1103.T00065
Betrieb	Part No. 45-573.1103.T00011	Start	Part No. 45-573.1103.T00029	Marche Arrêt	Part No. 45-573.1103.T00066
Störung	Part No. 45-573.1103.T00014	Open	Part No. 45-573.1103.T00032	Rearmement	Part No. 45-573.0K00.T00067
Hand Auto	Part No. 45-573.1103.T00015	Close	Part No. 45-573.1103.T00033		
		Running	Part No. 45-573.1103.T00035		
		Fault	Part No. 45-573.1103.T00036		
		Stop Start	Part No. 45-573.1103.T00038		
		Man Auto	Part No. 45-573.1103.T00043		

Symbols for legend plates black, 27 x 12.5 mm

Graphic symbols are according to ISO 7000 or IEC 60417.

	Part No. 45-573.1103.S00001		Part No. 45-573.1103.S00008 Arrow/Direction right
	Part No. 45-573.1103.S00002		Part No. 45-573.1103.S00009 Arrow/Direction up
	Part No. 45-573.1103.S00005		

Standard texts for legend plates silver, 27 x 17.5 mm

Example		Part No. 45-573.1A03.T00028
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Standard texts German		Standard texts English	
Aus	Part No. 45-573.1A03.T00002	On	Part No. 45-573.1A03.T00020
Auf	Part No. 45-573.1A03.T00003	Off	Part No. 45-573.1A03.T00021
Ab	Part No. 45-573.1A03.T00004	Stop	Part No. 45-573.1A03.T00028
Vor	Part No. 45-573.1A03.T00005	Start	Part No. 45-573.1A03.T00029
Zurück	Part No. 45-573.1A03.T00006	Reset	Part No. 45-573.1A03.T00030
Rechts	Part No. 45-573.1A03.T00007	Fault	Part No. 45-573.1A03.T00036
Halt	Part No. 45-573.1A03.T00009	Man O Auto	Part No. 45-573.1A03.T00043
Zu	Part No. 45-573.1A03.T00010		
Betrieb	Part No. 45-573.1A03.T00013		
Störung	Part No. 45-573.1A03.T00014		
Hand Auto	Part No. 45-573.1A03.T00015		
Hand O Auto	Part No. 45-573.1A03.T00017		

Symbols for legend plates silver, 27 x 17.5 mm

Graphic symbols are according to ISO 7000 or IEC 60417.

	Part No. 45-573.1A02.S00001		Part No. 45-573.1A02.S00007
	Part No. 45-573.1A02.S00002		Part No. 45-573.1A02.S00008 Arrow/Direction right
	Part No. 45-573.1A02.S00005		Part No. 45-573.1A02.S00009 Arrow/Direction up

Standard texts for legend plates black, 27 x 27 mm

Example		Part No. 45-573.1103.T00028
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Standard texts German		Standard texts English		Standard texts French	
Ein	Part No. 45-573.1105.T00001	On	Part No. 45-573.1105.T00020	Marche	Part No. 45-573.1105.T00048
Aus	Part No. 45-573.1105.T00002	Off	Part No. 45-573.1105.T00021	Arrêt	Part No. 45-573.1105.T00049
Auf	Part No. 45-573.1105.T00003	Up	Part No. 45-573.1105.T00022	Montée	Part No. 45-573.1105.T00050
Ab	Part No. 45-573.1105.T00004	Down	Part No. 45-573.1105.T00023	Descente	Part No. 45-573.1105.T00051
Vor	Part No. 45-573.1105.T00005	Forward	Part No. 45-573.1105.T00028	En Service	Part No. 45-573.1105.T00059
Zurück	Part No. 45-573.1105.T00006	Reverse	Part No. 45-573.1105.T00025	Defaut	Part No. 45-573.1105.T00060
Rechts	Part No. 45-573.1105.T00007	Stop	Part No. 45-573.1105.T00028	Sous tension	Part No. 45-573.1105.T00064
Links	Part No. 45-573.1105.T00008	Start	Part No. 45-573.1105.T00029	Manu Auto	Part No. 45-573.1105.T00065
Halt	Part No. 45-573.1105.T00009	Stop Start	Part No. 45-573.1105.T00038	Marche Arrêt	Part No. 45-573.1105.T00066
Zu	Part No. 45-573.1105.T00010	EMERGENCY STOP	Part No. 45-573.1105.T00046		
Betrieb	Part No. 45-573.1105.T00013				
Störung	Part No. 45-573.1105.T00014				
Hand Auto	Part No. 45-573.1105.T00015				

Symbols for legend plates black, 27 x 27 mm

Graphic symbols are according to ISO 7000 or IEC 60417.

	Part No. 45-573.1105.S00003		Part No. 45-573.1105.S00008 Arrow/Direction right
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Customized inscription for legend plates

All dimensionen in mm

Size of legend plates	Height of letters	Number of lines
27 x 12.5	4	1
	3.5	2
	2.5	3
27 x 17.5	4	1 – 2
	3	3
27 x 27	4	1 – 5

Up to 11 characters per line are possible.

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. 12VDC) 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 (V_R) 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



EAO Ansprechpartner.

Kundennahe Kompetenz.

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