

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: 11

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 11 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)

| | |
|-------------------------------|------------|
| Overview | |
| Numbering structure | 8 |
| Flush design | |
| Indicator | 20 |
| Pushbutton | 21 |
| Illuminated pushbutton | 23 |
| Keylock switch | 25 |
| Selector switch | 26 |
| Raised design | |
| Indicator | 34 |
| Pushbutton | 38 |
| Double pushbutton | 49 |
| Illuminated pushbutton | 51 |
| Double pushbutton illuminated | 59 |
| Emergency stop switch | 61 |
| Stop switch | 63 |
| Mushroom-head pushbutton | 65 |
| Keylock switch | 84 |
| Selector switch | 88 |
| Potentiometer | 107 |
| Toggle stick | 109 |
| Toggle switch | 111 |
| Accessories | 112 |
| Drawings | 144 |
| Technical data | 151 |
| Marking | 160 |
| Application guidelines | 167 |
| Index | 168 |

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

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 castallations

F = flush

Colour

1 = black

2 = red

4 = yellow

5 = green

6 = blue

8 = grey

9 = white

K = clear transparent

45 Numbering structure

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

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

45 Numbering structure

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

Shape of handle or front ring

8 = Diameter 30 mm

9 = Diameter 40 mm

A = Diameter 60 mm

Colour

2 = red

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

Shape of handle or front ring

9 = Diameter 40mm

Colour

1 = black

45 Numbering structure

Mushroom-head pushbutton

45 - 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

page 130



Illumination element

page 134

Additional Information

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



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 ring | Lens cap | Part No. | Weight |
|---|--|--------------------------------|-------------------------|----------|
|  | Indicator actuator, Front dimension Ø 38 mm | | | |
| red | Metal sandgrey | Plastic red transparent | 45-2T07.4FE0.000 | 0.048 kg |
|  | Indicator actuator, Front dimension Ø 38 mm | | | |
| yellow | Metal sandgrey | Plastic yellow transparent | 45-2T07.4FG0.000 | 0.048 kg |
|  | Indicator actuator, Front dimension Ø 38 mm | | | |
| green | Metal sandgrey | Plastic green transparent | 45-2T07.4FH0.000 | 0.048 kg |
|  | Indicator actuator, Front dimension Ø 38 mm | | | |
| blue | Metal sandgrey | Plastic blue transparent | 45-2T07.4FJ0.000 | 0.048 kg |
|  | Indicator actuator, Front dimension Ø 38 mm | | | |
| white | Metal sandgrey | Plastic colourless transparent | 45-2T07.4FK0.000 | 0.048 kg |

Pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Actuator



Holder

page 130



Switching element

page 132

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 ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|----------------|--|------------------|-------------------------|----------------|----------|
| | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic black | B | 45-2131.4F10.000 | 1 | 0.048 kg |
| | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic red | B | 45-2131.4F20.000 | 1 | 0.048 kg |
| | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic yellow | B | 45-2131.4F40.000 | 1 | 0.048 kg |
| | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic green | B | 45-2131.4F50.000 | 1 | 0.048 kg |
| | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic blue | B | 45-2131.4F60.000 | 1 | 0.048 kg |

45 Flush design

| Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic white | B | 45-2131.4F90.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic black | C | 45-2134.4F10.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic red | C | 45-2134.4F20.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic yellow | C | 45-2134.4F40.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic green | C | 45-2134.4F50.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic blue | C | 45-2134.4F60.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | |
| Metal sandgrey | Plastic white | C | 45-2134.4F90.000 | 2 | 0.048 kg |

Switching action: B = Momentary, C = Maintain

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

Illuminated pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Actuator



Holder

page 130



Switching element

page 132



Illumination element

page 134

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

| LED colour | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|---|----------------|--------------------------------|------------------|------------------|----------------|----------|
|  <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 38 mm</p> | | | | | | |
| red | Metal sandgrey | Plastic red transparent | B | 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 | B | 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 | B | 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 | B | 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 | B | 45-2231.4FK0.000 | 1 | 0.048 kg |

45 Flush design

| LED colour | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|--|---|--------------------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | | |
| red | Metal sandgrey | Plastic red transparent | C | 45-2234.4FE0.000 | 2 | 0.048 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | | |
| yellow | Metal sandgrey | Plastic yellow transparent | C | 45-2234.4FG0.000 | 2 | 0.048 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | | |
| green | Metal sandgrey | Plastic green transparent | C | 45-2234.4FH0.000 | 2 | 0.048 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | | |
| blue | Metal sandgrey | Plastic blue transparent | C | 45-2234.4FJ0.000 | 2 | 0.048 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 38 mm | | | | | |
| white | Metal sandgrey | Plastic colourless transparent | C | 45-2234.4FK0.000 | 2 | 0.048 kg |

Switching action: B = Momentary, C = Maintain

| | |
|---|---|
|  |  |
| Wiring diagram 1 | Wiring diagram 2 |

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

Equipment consisting of (schematic overview)



Actuator



Holder

page 130



Switching element

page 132

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 ring | Switching action | Switching angle | Key remove | Part No. | Wiring diagram | Weight |
|---|------------------|-----------------|------------|-------------------------|----------------|----------|
| <p>Keylock switch 2 positions, Front dimension Ø 38 mm</p> | | | | | | |
| Metal sandgrey | A - B | B = 45° | A | 45-290J.4F00.116 | 1 | 0.090 kg |
| | A - C | C = 90° | A + C | 45-290H.4F00.111 | 2 | 0.090 kg |
| | | | A | 45-290J.4F00.111 | 2 | 0.090 kg |
| <p>Keylock switch 3 positions, Front dimension Ø 38 mm</p> | | | | | | |
| Metal sandgrey | C - A - C | C = 45° | C - A - C | 45-290F.4F00.113 | 3 | 0.090 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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

page 130



Switching element

page 132



Illumination element

page 134

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 ring | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|---|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | A - B | B = 45° | 45-2844.4C20.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic green | Metal sandgrey | A - B | B = 45° | 45-2844.4C50.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic white | Metal sandgrey | A - B | B = 45° | 45-2844.4C90.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | A - C | C = 90° | 45-2828.4C20.001 | 2 | 0.055 kg |

| Lever | Front ring | 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 | Metal sandgrey | A - C | C = 90° | 45-2828.4C50.001 | 2 | 0.055 kg |
|  <p>Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm</p> | | | | | | |
| Plastic white | Metal sandgrey | A - C | C = 90° | 45-2828.4C90.001 | 2 | 0.055 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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 130



Switching element

page 132



Illumination element

page 134

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 ring | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | A - B | B = 45° | 45-2844.4D20.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic green | Metal sandgrey | A - B | B = 45° | 45-2844.4D50.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic white | Metal sandgrey | A - B | B = 45° | 45-2844.4D90.006 | 1 | 0.055 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | A - C | C = 90° | 45-2828.4D20.001 | 2 | 0.055 kg |

| Lever | Front ring | 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 | Metal sandgrey | A - C | C = 90° | 45-2828.4D50.001 | 2 | 0.055 kg |
|  <p>Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm</p> | | | | | | |
| Plastic white | Metal sandgrey | A - C | C = 90° | 45-2828.4D90.001 | 2 | 0.055 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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

page 130



Switching element

page 132



Illumination element

page 134

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 ring | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|---|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | C - A - C | C = 45° | 45-2819.4C20.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic green | Metal sandgrey | C - A - C | C = 45° | 45-2819.4C50.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic white | Metal sandgrey | C - A - C | C = 45° | 45-2819.4C90.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | B - A - B | B = 45° | 45-280S.4C20.003 | 2 | 0.055 kg |

| Lever | Front ring | 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 | Metal sandgrey | B - A - B | B = 45° | 45-280S.4C50.003 | 2 | 0.055 kg |
|  <p>Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm</p> | | | | | | |
| Plastic white | Metal sandgrey | B - A - B | B = 45° | 45-280S.4C90.003 | 2 | 0.055 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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 130



Switching element

page 132



Illumination element

page 134

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 ring | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | C - A - C | C = 45° | 45-2819.4D20.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic green | Metal sandgrey | C - A - C | C = 45° | 45-2819.4D50.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic white | Metal sandgrey | C - A - C | C = 45° | 45-2819.4D90.003 | 1 | 0.055 kg |
|  | Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm | | | | | |
| Plastic red | Metal sandgrey | B - A - B | B = 45° | 45-280S.4D20.003 | 2 | 0.055 kg |

| Lever | Front ring | 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 | Metal sandgrey | B - A - B | B = 45° | 45-280S.4D50.003 | 2 | 0.055 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm</p> | | | | | | |
| Plastic white | Metal sandgrey | B - A - B | B = 45° | 45-280S.4D90.003 | 2 | 0.055 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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 130



Illumination element

page 134

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 29.45 mm | | | |
| amber | Plastic | Plastic amber transparency | 45-2T00.10F0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| red | Plastic | Plastic red transparent | 45-2T00.10E0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| yellow | Plastic | Plastic yellow transparent | 45-2T00.10G0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| green | Plastic | Plastic green transparent | 45-2T00.10H0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| blue | Plastic | Plastic blue transparent | 45-2T00.10J0.000 | 0.001 kg |

| LED colour | Housing material | Lens cap | Part No. | Weight |
|---|---|--------------------------------|-------------------------|----------|
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| white | Plastic | Plastic white transparent | 45-2T00.10N0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| colourless | Plastic | Plastic colourless transparent | 45-2T00.10K0.000 | 0.001 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| amber | Metal | Plastic amber transparency | 45-2T00.20F0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| red | Metal | Plastic red transparent | 45-2T00.20E0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| yellow | Metal | Plastic yellow transparent | 45-2T00.20G0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| green | Metal | Plastic green transparent | 45-2T00.20H0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| blue | Metal | Plastic blue transparent | 45-2T00.20J0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| white | Metal | Plastic white transparent | 45-2T00.20N0.000 | 0.010 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | |
| colourless | Metal | Plastic colourless transparent | 45-2T00.20K0.000 | 0.010 kg |

45 Raised design

Indicator front illumination, IP66, IP67, IP69K



Product can differ from the current configuration.

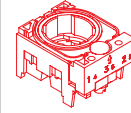


Dimensions [mm]

Equipment consisting of (schematic overview)



Actuator



Holder

page 130



Illumination element

page 134

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 ring | Lens | Housing material | Part No. | Weight |
|---|---|--------------------------------|------------------|-------------------------|----------|
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| red | Plastic black | Plastic red transparent | Plastic | 45-2T07.10E0.000 | 0.011 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| yellow | Plastic black | Plastic yellow transparent | Plastic | 45-2T07.10G0.000 | 0.011 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| green | Plastic black | Plastic green transparent | Plastic | 45-2T07.10H0.000 | 0.011 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| blue | Plastic black | Plastic blue transparent | Plastic | 45-2T07.10J0.000 | 0.011 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| colourless | Plastic black | Plastic colourless transparent | Plastic | 45-2T07.10K0.000 | 0.011 kg |

| LED colour | Front ring | Lens | Housing material | Part No. | Weight |
|--|---|--------------------------------|------------------|-------------------------|----------|
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| red | Metal sandgrey | Plastic red transparent | Plastic | 45-2T07.30E0.000 | 0.020 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| yellow | Metal sandgrey | Plastic yellow transparent | Plastic | 45-2T07.30G0.000 | 0.020 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| green | Metal sandgrey | Plastic green transparent | Plastic | 45-2T07.30H0.000 | 0.020 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| blue | Metal sandgrey | Plastic blue transparent | Plastic | 45-2T07.30J0.000 | 0.020 kg |
|  | Indicator actuator, Front dimension Ø 29.45 mm | | | | |
| colourless | Metal sandgrey | Plastic colourless transparent | Plastic | 45-2T07.30K0.000 | 0.020 kg |

45 Raised design

Pushbutton, 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)



Actuator



Holder

page 130



Switching element

page 132

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 ring | Lens | Housing material | Switching action | Part No. | Wiring dia-gram | Weight |
|---|---|--------------------|------------------|------------------|-------------------------|-----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic black | Plastic | B | 45-2131.1110.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic red | Plastic | B | 45-2131.1120.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic yellow | Plastic | B | 45-2131.1140.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic green | Plastic | B | 45-2131.1150.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic blue | Plastic | B | 45-2131.1160.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic grey | Plastic | B | 45-2131.1180.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic white | Plastic | B | 45-2131.1190.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic colourless | Plastic | B | 45-2131.11K0.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic black | Plastic | C | 45-2134.1110.000 | 2 | 0.013 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|----------------|------------------|------------------|-------------------------|----------------|----------|
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic red | Plastic | C | 45-2134.1120.000 | 2 | 0.013 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic yellow | Plastic | C | 45-2134.1140.000 | 2 | 0.013 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic green | Plastic | C | 45-2134.1150.000 | 2 | 0.013 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic blue | Plastic | C | 45-2134.1160.000 | 2 | 0.013 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic white | Plastic | C | 45-2134.1190.000 | 2 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic black | Plastic | B | 45-2131.3110.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic red | Plastic | B | 45-2131.3120.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic yellow | Plastic | B | 45-2131.3140.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic green | Plastic | B | 45-2131.3150.000 | 1 | 0.021 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring dia-gram | Weight |
|---|---|--------------------|------------------|------------------|-------------------------|-----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic blue | Plastic | B | 45-2131.3160.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic grey | Plastic | B | 45-2131.3180.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic white | Plastic | B | 45-2131.3190.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic colourless | Plastic | B | 45-2131.31K0.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic black | Plastic | C | 45-2134.3110.000 | 2 | 0.021 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic red | Plastic | C | 45-2134.3120.000 | 2 | 0.021 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic yellow | Plastic | C | 45-2134.3140.000 | 2 | 0.021 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic green | Plastic | C | 45-2134.3150.000 | 2 | 0.021 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic blue | Plastic | C | 45-2134.3160.000 | 2 | 0.021 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring dia-gram | Weight |
|---|---|--------------------|------------------|------------------|-------------------------|-----------------|----------|
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic white | Plastic | C | 45-2134.3190.000 | 2 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic black | Metal | B | 45-2131.2110.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic red | Metal | B | 45-2131.2120.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic yellow | Metal | B | 45-2131.2140.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic green | Metal | B | 45-2131.2150.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic blue | Metal | B | 45-2131.2160.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic grey | Metal | B | 45-2131.2180.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic white | Metal | B | 45-2131.2190.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic colourless | Metal | B | 45-2131.21K0.000 | 1 | 0.048 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|----------------|------------------|------------------|-------------------------|----------------|----------|
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic black | Metal | C | 45-2134.2110.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic red | Metal | C | 45-2134.2120.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic yellow | Metal | C | 45-2134.2140.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic green | Metal | C | 45-2134.2150.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic blue | Metal | C | 45-2134.2160.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic white | Metal | C | 45-2134.2190.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic black | Plastic | B | 45-2131.1210.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic red | Plastic | B | 45-2131.1220.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic yellow | Plastic | B | 45-2131.1240.000 | 1 | 0.013 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|--|----------------|----------------|------------------|------------------|------------------|----------------|----------|
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Plastic black | Plastic green | Plastic | B | 45-2131.1250.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Plastic black | Plastic blue | Plastic | B | 45-2131.1260.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Plastic black | Plastic white | Plastic | B | 45-2131.1290.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic black | Plastic | B | 45-2131.3210.000 | 1 | 0.021 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic red | Plastic | B | 45-2131.3220.000 | 1 | 0.021 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic yellow | Plastic | B | 45-2131.3240.000 | 1 | 0.021 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic green | Plastic | B | 45-2131.3250.000 | 1 | 0.021 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic blue | Plastic | B | 45-2131.3260.000 | 1 | 0.021 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic white | Plastic | B | 45-2131.3290.000 | 1 | 0.021 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring dia-gram | Weight |
|---|---|----------------|------------------|------------------|------------------|-----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic black | Metal | B | 45-2131.2210.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic red | Metal | B | 45-2131.2220.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic yellow | Metal | B | 45-2131.2240.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic green | Metal | B | 45-2131.2250.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic blue | Metal | B | 45-2131.2260.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic white | Metal | B | 45-2131.2290.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic red | Metal | C | 45-2134.2220.000 | 2 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic black | Plastic | B | 45-2131.1310.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic red | Plastic | B | 45-2131.1320.000 | 1 | 0.013 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|----------------|------------------|------------------|-------------------------|----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic yellow | Plastic | B | 45-2131.1340.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic green | Plastic | B | 45-2131.1350.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic blue | Plastic | B | 45-2131.1360.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Plastic black | Plastic white | Plastic | B | 45-2131.1390.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic black | Plastic | B | 45-2131.3310.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic red | Plastic | B | 45-2131.3320.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic yellow | Plastic | B | 45-2131.3340.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic green | Plastic | B | 45-2131.3350.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic blue | Plastic | B | 45-2131.3360.000 | 1 | 0.021 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|----------------|------------------|------------------|-------------------------|----------------|----------|
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal sandgrey | Plastic white | Plastic | B | 45-2131.3390.000 | 1 | 0.021 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic black | Metal | B | 45-2131.2310.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic red | Metal | B | 45-2131.2320.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic yellow | Metal | B | 45-2131.2340.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic green | Metal | B | 45-2131.2350.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic blue | Metal | B | 45-2131.2360.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring | Metal silver | Plastic white | Metal | B | 45-2131.2390.000 | 1 | 0.048 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic black | Plastic | B | 45-2131.1410.000 | 1 | 0.013 kg |
|  | Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic red | Plastic | B | 45-2131.1420.000 | 1 | 0.013 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|--|---------------|----------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic yellow | Plastic | B | 45-2131.1440.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic green | Plastic | B | 45-2131.1450.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic blue | Plastic | B | 45-2131.1460.000 | 1 | 0.013 kg |
|  <p>Pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic white | Plastic | B | 45-2131.1490.000 | 1 | 0.013 kg |

Switching action: B = Momentary, C = Maintain

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

Double pushbutton, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Actuator



Holder

page 130



Switching element

page 132

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»

| Product attribute | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|--|---------------|---------------------|------------------|-------------------------|----------------|----------|
| | | | | | | |
| Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with front ring | Plastic black | Plastic green-red | B | 45-2J31.16T0.000 | 1 | 0.026 kg |
| | | | | | | |
| Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with front ring | Plastic black | Plastic white-black | B | 45-2J31.16V0.000 | 1 | 0.026 kg |
| | | | | | | |
| Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with/raised above front ring | Plastic black | Plastic green-red | B | 45-2J31.15T0.000 | 1 | 0.026 kg |

45 Raised design

| Product attribute | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|---|--|---------------------|------------------|-------------------------|----------------|----------|
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with/raised above front ring | Plastic black | Plastic white-black | B | 45-2J31.15V0.000 | 1 | 0.026 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with front ring | Metal sandgrey | Plastic green-red | B | 45-2J31.36T0.000 | 1 | 0.043 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with front ring | Metal sandgrey | Plastic white-black | B | 45-2J31.36V0.000 | 1 | 0.043 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with/raised above front ring | Metal sandgrey | Plastic green-red | B | 45-2J31.35T0.000 | 1 | 0.043 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with front ring | Metal silver | Plastic green-red | B | 45-2J31.26T0.000 | 1 | 0.068 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with front ring | Metal silver | Plastic white-black | B | 45-2J31.26V0.000 | 1 | 0.068 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with/raised above front ring | Metal silver | Plastic green-red | B | 45-2J31.25T0.000 | 1 | 0.068 kg |
|  | Double pushbutton actuator, momentary, Front dimension 57.7 x 29.8 mm | | | | | |
| 2 lenses, level with/raised above front ring | Metal silver | Plastic white-black | B | 45-2J31.25V0.000 | 1 | 0.068 kg |

Switching action: B = Momentary



Illuminated 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»

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|----------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic amber transparency | Plastic | B | 45-2231.11F0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic red transparent | Plastic | B | 45-2231.11E0.000 | 1 | 0.011 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic yellow transparent | Plastic | B | 45-2231.11G0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic green transparent | Plastic | B | 45-2231.11H0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic blue transparent | Plastic | B | 45-2231.11J0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic white transparent | Plastic | B | 45-2231.11N0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic colourless transparent | Plastic | B | 45-2231.11K0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic red transparent | Plastic | C | 45-2234.11E0.000 | 2 | 0.011 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic yellow transparent | Plastic | C | 45-2234.11G0.000 | 2 | 0.011 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic green transparent | Plastic | C | 45-2234.11H0.000 | 2 | 0.011 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic blue transparent | Plastic | C | 45-2234.11J0.000 | 2 | 0.011 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic white transparent | Plastic | C | 45-2234.11N0.000 | 2 | 0.011 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Plastic black | Plastic colourless transparent | Plastic | C | 45-2234.11K0.000 | 2 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic amber transparency | Plastic | B | 45-2231.31F0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic red transparent | Plastic | B | 45-2231.31E0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic yellow transparent | Plastic | B | 45-2231.31G0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic green transparent | Plastic | B | 45-2231.31H0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic blue transparent | Plastic | B | 45-2231.31J0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic white transparent | Plastic | B | 45-2231.31N0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic colourless transparent | Plastic | B | 45-2231.31K0.000 | 1 | 0.020 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic red transparent | Plastic | C | 45-2234.31E0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic yellow transparent | Plastic | C | 45-2234.31G0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic green transparent | Plastic | C | 45-2234.31H0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic blue transparent | Plastic | C | 45-2234.31J0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic white transparent | Plastic | C | 45-2234.31N0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal sandgrey | Plastic colourless transparent | Plastic | C | 45-2234.31K0.000 | 2 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic amber transparency | Metal | B | 45-2231.21F0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic red transparent | Metal | B | 45-2231.21E0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic yellow transparent | Metal | B | 45-2231.21G0.000 | 1 | 0.032 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic green transparent | Metal | B | 45-2231.21H0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic blue transparent | Metal | B | 45-2231.21J0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic white transparent | Metal | B | 45-2231.21N0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic colourless transparent | Metal | B | 45-2231.21K0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic red transparent | Metal | C | 45-2234.21E0.000 | 2 | 0.032 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic yellow transparent | Metal | C | 45-2234.21G0.000 | 2 | 0.032 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic green transparent | Metal | C | 45-2234.21H0.000 | 2 | 0.032 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic blue transparent | Metal | C | 45-2234.21J0.000 | 2 | 0.032 kg |
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic white transparent | Metal | C | 45-2234.21N0.000 | 2 | 0.032 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Maintain, Front dimension Ø 29.45 mm | | | | | | |
| Lens level with front ring | Metal silver | Plastic colourless transparent | Metal | C | 45-2234.21K0.000 | 2 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic red transparent | Plastic | B | 45-2231.12E0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic yellow transparent | Plastic | B | 45-2231.12G0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic green transparent | Plastic | B | 45-2231.12H0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic blue transparent | Plastic | B | 45-2231.12J0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Plastic black | Plastic colourless transparent | Plastic | B | 45-2231.12K0.000 | 1 | 0.011 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic red transparent | Plastic | B | 45-2231.32E0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic yellow transparent | Plastic | B | 45-2231.32G0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic green transparent | Plastic | B | 45-2231.32H0.000 | 1 | 0.020 kg |

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|--------------------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic blue transparent | Plastic | B | 45-2231.32J0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal sandgrey | Plastic colourless transparent | Plastic | B | 45-2231.32K0.000 | 1 | 0.020 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic red transparent | Metal | B | 45-2231.22E0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic amber transparency | Metal | B | 45-2231.22F0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic yellow transparent | Metal | B | 45-2231.22G0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic green transparent | Metal | B | 45-2231.22H0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic blue transparent | Metal | B | 45-2231.22J0.000 | 1 | 0.032 kg |
|  | Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm | | | | | | |
| Lens raised above bezel | Metal silver | Plastic colourless transparent | Metal | B | 45-2231.22K0.000 | 1 | 0.032 kg |

45 Raised design

| Product attribute | Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|--|---------------|---------------------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens raised above bezel | Metal silver | Plastic white transparent | Metal | B | 45-2231.22N0.000 | 1 | 0.032 kg |
|  <p>Illuminated pushbutton actuator, Momentary, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Lens lower than front ring, with castellation | Plastic black | Plastic blue transparent | Plastic | B | 45-2231.14J0.000 | 1 | 0.011 kg |

Switching action: B = Momentary, C = Maintain

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

Illuminated double 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]



Product can differ from the current configuration.



Mounting cut-outs [mm]

Additional Information

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

| Product attribute | Front ring | Lens | Switching action | Part No. | Component layout | Wiring diagram | Weight |
|--|---------------|---------------------|------------------|-------------------------|------------------|----------------|----------|
|  | | | | | | | |
| Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | | |
| 2 lenses, level with front ring | Plastic black | Plastic green-red | B | 45-2K31.16T0.000 | 4 | 1 | 0.025 kg |
|  | | | | | | | |
| Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | | |
| 2 lenses, level with front ring | Plastic black | Plastic white-black | B | 45-2K31.16V0.000 | 4 | 1 | 0.025 kg |
|  | | | | | | | |
| Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | | |
| 2 lenses, level with/raised above front ring | Plastic black | Plastic green-red | B | 45-2K31.15T0.000 | 4 | 1 | 0.025 kg |

45 Raised design

| Product attribute | Front ring | Lens | Switching action | Part No. | Bauteile-Layout | Wiring diagram | Weight |
|--|--|---------------------|------------------|-------------------------|-----------------|----------------|----------|
|  | Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with/raised above front ring | Plastic black | Plastic white-black | B | 45-2K31.15V0.000 | 4 | 1 | 0.025 kg |
|  | Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with front ring | Metal sandgrey | Plastic green-red | B | 45-2K31.36T0.000 | 4 | 1 | 0.043 kg |
|  | Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with front ring | Metal sandgrey | Plastic white-black | B | 45-2K31.36V0.000 | 4 | 1 | 0.043 kg |
|  | Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with/raised above front ring | Metal sandgrey | Plastic green-red | B | 45-2K31.35T0.000 | 4 | 1 | 0.043 kg |
|  | Illuminated double pushbutton actuator, Momentary, Front dimension 57.7 x 29.8 mm | | | | | | |
| 2 lenses, level with/raised above front ring | Metal sandgrey | Plastic white-black | B | 45-2K31.35V0.000 | 4 | 1 | 0.043 kg |

Switching action: B = Momentary

The component layouts you will find from page 144



Emergency-stop switch foolproof, EN IEC 60947-5-5, 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.



Product can differ from the current configuration.

Dimensions [mm]



Mounting cut-outs [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

| Product attribute | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|--|---------------|-------------|------------------|-------------------------|----------------|----------|
| | | | | | | |
| Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 33.8 mm | | | | | | |
| twist to release | Plastic black | Plastic red | C | 45-2C36.1820.000 | 1 | 0.046 kg |
| | | | | | | |
| Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 33.8 mm | | | | | | |
| twist to release, illuminable | Plastic black | Plastic red | C | 45-2D36.1820.000 | 2 | 0.046 kg |

45 Raised design

| Product attribute | Front ring | Lens | Switching action | Part No. | Wiring diagram | Weight |
|---|--|-------------|------------------|-------------------------|----------------|----------|
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 33.8 mm | | | | | |
| twist to release, illuminable | Metall silver | Plastic red | C | 45-2D36.2820.000 | 2 | 0.046 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm | | | | | |
| twist to release | Plastic black | Plastic red | C | 45-2C36.1920.000 | 1 | 0.046 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm | | | | | |
| Pull release | Plastic black | Plastic red | C | 45-2C37.1920.000 | 1 | 0.046 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm | | | | | |
| twist to release, illuminable | Plastic black | Plastic red | C | 45-2D36.1920.000 | 2 | 0.046 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 60 mm | | | | | |
| twist to release | Plastic black | Plastic red | C | 45-2C36.1A20.000 | 1 | 0.056 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 60 mm | | | | | |
| twist to release, illuminable | Plastic black | Plastic red | C | 45-2D36.1A20.000 | 2 | 0.053 kg |
|  | Emergency-stop switch actuator, foolproof EN IEC 60947-5-5, Front dimension Ø 40 mm | | | | | |
| key to release | Plastic black | Plastic red | C | 45-2C35.1920.110 | 1 | 0.083 kg |

Switching action: C = Maintain



Stop switch actuator, foolproof, 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»

| Product attribute | Front ring | Lens | Switching action | Lever | Part No. | Wiring diagram | Weight |
|---|---|---------------|------------------|-------|-------------------------|----------------|----------|
|  | Stop switch actuator, foolproof, Front dimension Ø 40 mm | | | | | | |
| twist to release | Plastic black | Plastic black | C | – | 45-2736.1910.000 | 1 | 0.036 kg |
|  | Stop switch actuator, foolproof, Front dimension Ø 40 mm | | | | | | |
| twist to release | Plastic black | Plastic blue | C | – | 45-2736.1960.000 | 1 | 0.046 kg |

45 Raised design

| Product attribute | Front ring | 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 | - | C | 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 | - | C | Plastic red | 45-2729.1020.000 | 1 | 0.018 kg |

Switching action: C = Maintain



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]



Mounting cut-outs [mm]



Product can differ from the current configuration.

Additional Information

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

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic black | Plastic | C | 45-2530.1810.000 | 2 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic red | Plastic | C | 45-2530.1820.000 | 2 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic yellow | Plastic | C | 45-2530.1840.000 | 2 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic black | Plastic | B | 45-2531.1810.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic red | Plastic | B | 45-2531.1820.000 | 1 | 0.020 kg |

45 Raised design

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic yellow | Plastic | B | 45-2531.1840.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic green | Plastic | B | 45-2531.1850.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic black | Plastic | C | 45-2530.3810.000 | 2 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic red | Plastic | C | 45-2530.3820.000 | 2 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic black | Plastic | B | 45-2531.3810.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic red | Plastic | B | 45-2531.3820.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic yellow | Plastic | B | 45-2531.3840.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic green | Plastic | B | 45-2531.3850.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic black | Metal | C | 45-2530.2810.000 | 2 | 0.052 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|--|--|------------------|------------------|-------------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic red | Metal | C | 45-2530.2820.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic black | Metal | B | 45-2531.2810.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic red | Metal | B | 45-2531.2820.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic yellow | Metal | B | 45-2531.2840.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic green | Metal | B | 45-2531.2850.000 | 1 | 0.052 kg |

Switching action: B = Momentary, C = Maintain



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 130



Switching element

page 132

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 ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|----------------|------------------|------------------|------------------|----------------|----------|
| | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | | |
| Plastic black | Plastic black | Plastic | C | 45-2530.1910.000 | 2 | 0.022 kg |
| | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | | |
| Plastic black | Plastic red | Plastic | C | 45-2530.1920.000 | 2 | 0.020 kg |
| | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | | |
| Plastic black | Plastic yellow | Plastic | C | 45-2530.1940.000 | 2 | 0.020 kg |
| | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | | |
| Plastic black | Plastic green | Plastic | C | 45-2530.1950.000 | 2 | 0.020 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic black | Plastic | B | 45-2531.1910.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic red | Plastic | B | 45-2531.1920.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic yellow | Plastic | B | 45-2531.1940.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic green | Plastic | B | 45-2531.1950.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic black | Plastic | C | 45-2530.3910.000 | 2 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic red | Plastic | C | 45-2530.3920.000 | 2 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic black | Plastic | B | 45-2531.3910.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic red | Plastic | B | 45-2531.3920.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic yellow | Plastic | B | 45-2531.3940.000 | 1 | 0.034 kg |

45 Raised design

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic green | Plastic | B | 45-2531.3950.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic black | Metal | C | 45-2530.2910.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red | Metal | C | 45-2530.2920.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic yellow | Metal | C | 45-2530.2940.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic black | Metal | B | 45-2531.2910.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red | Metal | B | 45-2531.2920.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic yellow | Metal | B | 45-2531.2940.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic green | Metal | B | 45-2531.2950.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic black | Metal | B/C | 45-2532.2910.000 | 3 | 0.052 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-------------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red | Metal | B/C | 45-2532.2920.000 | 3 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic black | Metal | B/B | 45-2533.2910.000 | 4 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red | Metal | B/B | 45-2533.2920.000 | 4 | 0.052 kg |

Switching action: B = Momentary, C = Maintain, B/B = Momentary/Momentary, B/C = Momentary/Maintain

| | | | |
|---|---|---|---|
|  |  |  |  |
| 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)



Actuator



Holder

page 130



Switching element

page 132

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 ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---------------|------------------|------------------|------------------|----------------|----------|
|  | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | | |
| Plastic black | Plastic black | Plastic | C | 45-2530.1A10.000 | 2 | 0.022 kg |
|  | | | | | | |
| Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | | |
| Plastic black | Plastic red | Plastic | C | 45-2530.1A20.000 | 2 | 0.020 kg |
|  | | | | | | |
| Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | | |
| Plastic black | Plastic black | Plastic | B | 45-2531.1A10.000 | 1 | 0.020 kg |
|  | | | | | | |
| Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | | |
| Plastic black | Plastic red | Plastic | B | 45-2531.1A20.000 | 1 | 0.020 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Plastic black | Plastic yellow | Plastic | B | 45-2531.1A40.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Plastic black | Plastic green | Plastic | B | 45-2531.1A50.000 | 1 | 0.020 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic black | Metal | C | 45-2530.2A10.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic red | Metal | C | 45-2530.2A20.000 | 2 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic black | Metal | B | 45-2531.2A10.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic red | Metal | B | 45-2531.2A20.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic yellow | Metal | B | 45-2531.2A40.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic green | Metal | B | 45-2531.2A50.000 | 1 | 0.052 kg |

Switching action: B = Momentary, C = Maintain



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.

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic red transparent | Plastic | C | 45-2630.18E0.000 | 1 | 0.027 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic yellow transparent | Plastic | C | 45-2630.18G0.000 | 1 | 0.027 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic green transparent | Plastic | C | 45-2630.18H0.000 | 1 | 0.027 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic blue transparent | Plastic | C | 45-2630.18J0.000 | 1 | 0.027 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic colourless transparent | Plastic | C | 45-2630.18K0.000 | 1 | 0.027 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-------------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic red transparent | Plastic | B | 45-2631.18E0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic yellow transparent | Plastic | B | 45-2631.18G0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic green transparent | Plastic | B | 45-2631.18H0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic blue transparent | Plastic | B | 45-2631.18J0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic colourless transparent | Plastic | B | 45-2631.18K0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Plastic black | Plastic white transparent | Plastic | B | 45-2631.18N0.000 | 2 | 0.033 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic red transparent | Plastic | C | 45-2630.38E0.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic yellow transparent | Plastic | C | 45-2630.38G0.000 | 1 | 0.034 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic yellow transparent | Plastic | B | 45-2631.38G0.000 | 2 | 0.026 kg |

45 Raised design

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic red transparent | Plastic | B | 45-2631.38H0.000 | 2 | 0.026 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic colourless transparent | Plastic | B | 45-2631.38K0.000 | 2 | 0.026 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm | | | | | |
| Metal sandgrey | Plastic white transparent | Plastic | B | 45-2631.38N0.000 | 2 | 0.026 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic amber transparency | Metal | C | 45-2630.28F0.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic red transparent | Metal | C | 45-2630.28E0.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic yellow transparent | Metal | C | 45-2630.28G0.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | C | 45-2630.28H0.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic blue transparent | Metal | C | 45-2630.28J0.000 | 1 | 0.052 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 30 mm | | | | | |
| Metal silver | Plastic colourless transparent | Metal | C | 45-2630.28K0.000 | 1 | 0.052 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|----------------------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p> | | | | | | |
| Metal silver | Plastic yellow transparent | Metal | B | 45-2631.28G0.000 | 2 | 0.041 kg |
|  <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p> | | | | | | |
| Metal silver | Plastic green transparent | Metal | B | 45-2631.28H0.000 | 2 | 0.041 kg |
|  <p>Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 30 mm</p> | | | | | | |
| Metal silver | Plastic white transparent | Metal | B | 45-2631.28N0.000 | 2 | 0.041 kg |

Switching action: B = Momentary, C = Maintain



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.

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic red transparent | Plastic | C | 45-2630.19E0.000 | 1 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic yellow transparent | Plastic | C | 45-2630.19G0.000 | 1 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic green transparent | Plastic | C | 45-2630.19H0.000 | 1 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic blue transparent | Plastic | C | 45-2630.19J0.000 | 1 | 0.028 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring dia-gram | Weight |
|---|--|------------------|------------------|------------------|-----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic colourless transparent | Plastic | C | 45-2630.19K0.000 | 1 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic yellow transparent | Plastic | B | 45-2631.19G0.000 | 2 | 0.019 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic green transparent | Plastic | B | 45-2631.19H0.000 | 2 | 0.019 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic colourless transparent | Plastic | B | 45-2631.19K0.000 | 2 | 0.019 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Plastic black | Plastic white transparent | Plastic | B | 45-2631.19N0.000 | 2 | 0.019 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic red transparent | Plastic | C | 45-2630.39E0.000 | 1 | 0.035 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic yellow transparent | Plastic | C | 45-2630.39G0.000 | 1 | 0.035 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic yellow transparent | Plastic | B | 45-2631.39G0.000 | 2 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic green transparent | Plastic | B | 45-2631.39H0.000 | 2 | 0.028 kg |

45 Raised design

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic colourless transparent | Plastic | B | 45-2631.39K0.000 | 2 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal sandgrey | Plastic white transparent | Plastic | B | 45-2631.39N0.000 | 2 | 0.028 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red transparent | Metal | C | 45-2630.29E0.000 | 1 | 0.035 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic amber transparency | Metal | C | 45-2630.29F0.000 | 1 | 0.053 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic yellow transparent | Metal | C | 45-2630.29G0.000 | 1 | 0.053 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | C | 45-2630.29H0.000 | 1 | 0.053 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic blue transparent | Metal | C | 45-2630.29J0.000 | 1 | 0.053 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic colourless transparent | Metal | C | 45-2630.29K0.000 | 1 | 0.053 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic amber transparency | Metal | B | 45-2631.29F0.000 | 2 | 0.042 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-------------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic yellow transparent | Metal | B | 45-2631.29G0.000 | 2 | 0.042 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | B | 45-2631.29H0.000 | 2 | 0.042 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic white transparent | Metal | B | 45-2631.29N0.000 | 2 | 0.042 kg |
|  | Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red transparent | Metal | B/C | 45-2632.29E0.000 | 3 | 0.051 kg |
|  | Mushroom-head pushbutton actuator, momentary/maintain, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | B/C | 45-2632.29H0.000 | 3 | 0.051 kg |
|  | Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic red transparent | Metal | B/B | 45-2633.29E0.000 | 4 | 0.051 kg |
|  | Mushroom-head pushbutton actuator, momentary/momentary, Front dimension Ø 40 mm | | | | | |
| Metal silver | Plastic white transparent | Metal | B/B | 45-2633.29N0.000 | 4 | 0.051 kg |

Switching action: B = Momentary, C = Maintain, B/B = Momentary/Momentary, B/C = Momentary/Maintain



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]

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------------|-------------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic red transparent | Metal | C | 45-2630.2AE0.000 | 1 | 0.057 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic yellow transparent | Metal | C | 45-2630.2AG0.000 | 1 | 0.057 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | C | 45-2630.2AH0.000 | 1 | 0.057 kg |

| Front ring | Lens | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|----------------|----------|
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic blue transparent | Metal | C | 45-2630.2AJ0.000 | 1 | 0.057 kg |
|  | Mushroom-head pushbutton actuator, Maintain, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic colourless transparent | Metal | C | 45-2630.2AK0.000 | 1 | 0.057 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic amber transparency | Metal | B | 45-2631.2AF0.000 | 2 | 0.045 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic yellow transparent | Metal | B | 45-2631.2AG0.000 | 2 | 0.045 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic green transparent | Metal | B | 45-2631.2AH0.000 | 2 | 0.045 kg |
|  | Mushroom-head pushbutton actuator, Momentary, Front dimension Ø 60 mm | | | | | |
| Metal silver | Plastic white transparent | Metal | B | 45-2631.2AN0.000 | 2 | 0.045 kg |

Switching action: B = Momentary, C = Maintain



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 ring | Housing material | Switching action | Switching angle | Key remove | Part No. | Wiring diagram | Weight |
|--|------------------|------------------|-----------------|------------|-------------------------|----------------|----------|
|  <p>Keylock switch actuator 2 positions, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic black | Plastic | A - B | B = 45° | A | 45-290K.1000.116 | 1 | 0.046 kg |
| | | A - C | C = 90° | A | 45-290J.1000.111 | 2 | 0.046 kg |
| | | A - C | C = 90° | A + C | 45-290H.1000.111 | 2 | 0.046 kg |
| | | A - C | C = 90° | A | 45-2925.1000.111 | 2 | 0.046 kg |
|  <p>Keylock switch actuator 2 positions, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Metal sandgrey | Plastic | A - B | B = 45° | A | 45-290K.3000.116 | 1 | 0.061 kg |
| | | A - C | C = 90° | A | 45-290J.3000.111 | 2 | 0.061 kg |
| | | A - C | C = 90° | A + C | 45-290H.3000.111 | 2 | 0.061 kg |
| | | A - C | C = 90° | A | 45-2925.3000.111 | 2 | 0.061 kg |

| Front ring | Housing material | Switching action | Switching angle | Key remove | Part No. | Wiring diagram | Weight |
|---|------------------|------------------|-----------------|------------|-------------------------|----------------|----------|
|  <p>Keylock switch actuator 2 positions, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Metal silver | Metal | A - B | B = 45° | A | 45-290K.2000.116 | 1 | 0.080 kg |
| | | A - C | C = 90° | A | 45-290J.2000.111 | 2 | 0.080 kg |
| | | A - C | C = 90° | A + C | 45-290H.2000.111 | 2 | 0.080 kg |
| | | A - C | C = 90° | A | 45-2925.2000.111 | 2 | 0.080 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



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 ring | Switching action | Switching angle | Key remove | Part No. | Wiring diagram | Weight |
|--|------------------|------------------|------------|-------------------------|----------------|----------|
|  <p>Keylock switch actuator 3 positions, Front dimension Ø 29.45 mm</p> | C - A - C | C = 45° | A | 45-2924.1000.113 | 1 | 0.060 kg |
| | | C = 45° | C + A + C | 45-290F.1000.113 | 1 | 0.060 kg |
| | | C = 45° | C - - | 45-290D.1000.113 | 1 | 0.060 kg |
| | | C = 45° | - - C | 45-2917.1000.113 | 1 | 0.060 kg |
| | | C = 45° | C + C | 45-290C.1000.113 | 1 | 0.060 kg |
| | | C = 45° | C + A | 45-290G.1000.113 | 1 | 0.060 kg |
| | B - A - B | B = 45° | A | 45-290Z.1000.113 | 2 | 0.060 kg |
| | C - A - B | C = 45°, B = 45° | A | 45-2922.1000.113 | 3 | 0.060 kg |
| | | C = 45°, B = 45° | C | 45-290A.1000.113 | 3 | 0.060 kg |
| | | C = 45°, B = 45° | C + A | 45-290E.1000.113 | 3 | 0.060 kg |
| | B - A - C | B = 45°, C = 45° | A | 45-2911.1000.113 | 4 | 0.060 kg |
| | | B = 45°, C = 45° | C | 45-290W.1000.113 | 4 | 0.060 kg |
| | | B = 45°, C = 45° | A + C | 45-2910.1000.113 | 4 | 0.060 kg |

| Front ring | Switching action | Switching angle | Key remove | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------|-------------------------|----------------|----------|
|  Keylock switch actuator 3 positions, Front dimension Ø 29.45 mm | | | | | | |
| Metal sandgrey | C - A - C | C = 45° | A | 45-2924.3000.113 | 1 | 0.061 kg |
| | | C = 45° | C + A + C | 45-290F.3000.113 | 1 | 0.061 kg |
| | | C = 45° | C - - | 45-290D.3000.113 | 1 | 0.061 kg |
| | | C = 45° | - - C | 45-2917.3000.113 | 1 | 0.061 kg |
| | | C = 45° | C + C | 45-290C.3000.113 | 1 | 0.061 kg |
| | | C = 45° | C + A | 45-290G.3000.113 | 1 | 0.061 kg |
| | B - A - B | B = 45° | A | 45-290Z.3000.113 | 2 | 0.061 kg |
| | C - A - B | C = 45°, B = 45° | A | 45-2922.3000.113 | 3 | 0.061 kg |
| | B - A - C | B = 45°, C = 45° | A | 45-2911.3000.113 | 4 | 0.061 kg |
| |  Keylock switch actuator 3 positions, Front dimension Ø 29.45 mm | | | | | |
| Metal silver | C - A - C | C = 45° | A | 45-2924.2000.113 | 1 | 0.080 kg |
| | | C = 45° | C + A + C | 45-290F.2000.113 | 1 | 0.080 kg |
| | | C = 45° | C - - | 45-290D.2000.113 | 1 | 0.080 kg |
| | | C = 45° | - - C | 45-2917.2000.113 | 1 | 0.080 kg |
| | | C = 45° | C + C | 45-290C.2000.113 | 1 | 0.080 kg |
| | | C = 45° | C + A | 45-290G.2000.113 | 1 | 0.080 kg |
| | B - A - B | B = 45° | A | 45-290Z.2000.113 | 2 | 0.080 kg |
| | C - A - B | C = 45°, B = 45° | A | 45-2922.2000.113 | 3 | 0.080 kg |
| | | C = 45°, B = 45° | C | 45-290A.2000.113 | 3 | 0.080 kg |
| | | C = 45°, B = 45° | C + A | 45-290E.2000.113 | 3 | 0.080 kg |
| | B - A - C | B = 45°, C = 45° | A | 45-2911.2000.113 | 4 | 0.080 kg |
| | | B = 45°, C = 45° | A + C | 45-2910.2000.113 | 4 | 0.080 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



45 Raised design

Selector switch actuator 2 positions round lever, 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)

| | | |
|--|-----------------------------|----------|
| | Actuator | |
| | Holder | page 130 |
| | Switching element | page 132 |
| | Illumination element | page 134 |

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 ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---------------|--|------------------|------------------|-----------------|------------------|----------------|----------|
| | Selector switch actuator 2 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | A - C | C = 90° | 45-2828.1E20.001 | 1 | 0.023 kg |
| | Selector switch actuator 2 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | A - C | C = 90° | 45-2828.1E90.001 | 1 | 0.023 kg |
| | Selector switch actuator 2 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3E20.001 | 1 | 0.023 kg |
| | Selector switch actuator 2 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3E90.001 | 1 | 0.023 kg |

Switching action: A = Rest, C = Maintain



45 Raised design

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



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

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



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)

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | A - B | B = 45° | 45-2844.1C20.006 | 1 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | A - B | B = 45° | 45-2844.1C40.006 | 1 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | A - B | B = 45° | 45-2844.1C50.006 | 1 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | A - B | B = 45° | 45-2844.1C60.006 | 1 | 0.022 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | A - B | B = 45° | 45-2844.1C90.006 | 1 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | A - B | B = 45° | 45-2844.3C20.006 | 1 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | A - B | B = 45° | 45-2844.3C40.006 | 1 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | A - B | B = 45° | 45-2844.3C50.006 | 1 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | A - B | B = 45° | 45-2844.3C60.006 | 1 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | A - B | B = 45° | 45-2844.3C90.006 | 1 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | A - B | B = 45° | 45-2844.2C20.006 | 1 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal silver | Metal | A - B | B = 45° | 45-2844.2C40.006 | 1 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | A - B | B = 45° | 45-2844.2C50.006 | 1 | 0.044 kg |

45 Raised design

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal silver | Metal | A - B | B = 45° | 45-2844.2C60.006 | 1 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | A - B | B = 45° | 45-2844.2C90.006 | 1 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | A - C | C = 90° | 45-2828.1C20.001 | 2 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | A - C | C = 90° | 45-2828.1C40.001 | 2 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | A - C | C = 90° | 45-2828.1C50.001 | 2 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | A - C | C = 90° | 45-2828.1C60.001 | 2 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | A - C | C = 90° | 45-2828.1C90.001 | 2 | 0.022 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3C20.001 | 2 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3C40.001 | 2 | 0.029 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3C50.001 | 2 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3C60.001 | 2 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3C90.001 | 2 | 0.029 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | A - C | C = 90° | 45-2828.2C20.001 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic ambergris | Metal silver | Metal | A - C | C = 90° | 45-2828.2C30.001 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | A - C | C = 90° | 45-2828.2C50.001 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | A - C | C = 90° | 45-2828.2C90.001 | 2 | 0.044 kg |

Switching action: A = Rest, B = Momentary, C = Maintain



45 Raised design

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



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

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



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)

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---------------|---|------------------|------------------|-----------------|-------------------------|----------------|----------|
| | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | A - C | C = 90° | 45-2828.1D20.001 | 1 | 0.022 kg |
| | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | A - C | C = 90° | 45-2828.1D90.001 | 1 | 0.022 kg |
| | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3D20.001 | 1 | 0.029 kg |
| | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | A - C | C = 90° | 45-2828.3D90.001 | 1 | 0.029 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|---|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | A - C | C = 90° | 45-2828.2D20.001 | 1 | 0.022 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal silver | Metal | A - C | C = 90° | 45-2828.2D40.001 | 1 | 0.052 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | A - C | C = 90° | 45-2828.2D50.001 | 1 | 0.052 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal silver | Metal | A - C | C = 90° | 45-2828.2D60.001 | 1 | 0.052 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | A - C | C = 90° | 45-2828.2D90.001 | 1 | 0.052 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal silver | Metal | A - B | B = 45° | 45-2844.2D40.006 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | A - B | B = 45° | 45-2844.2D50.006 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal silver | Metal | A - B | B = 45° | 45-2844.2D60.006 | 2 | 0.044 kg |
|  | Selector switch actuator 2 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | A - B | B = 45° | 45-2844.2D90.006 | 2 | 0.044 kg |

Switching action: A = Rest, B = Momentary, C = Maintain

45 Raised design



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 ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | C - A - C | C = 45° | 45-2819.1C20.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | C - A - C | C = 45° | 45-2819.1C40.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | C - A - C | C = 45° | 45-2819.1C50.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | C - A - C | C = 45° | 45-2819.1C60.003 | 1 | 0.022 kg |

45 Raised design

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | C - A - C | C = 45° | 45-2819.1C90.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | B - A - B | B = 45° | 45-280S.1C20.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | B - A - B | B = 45° | 45-280S.1C40.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | B - A - B | B = 45° | 45-280S.1C50.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | B - A - B | B = 45° | 45-280S.1C60.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | B - A - B | B = 45° | 45-280S.1C90.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.1C20.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.1C40.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.1C50.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.1C60.003 | 3 | 0.022 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.1C90.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Plastic black | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.1C20.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Plastic black | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.1C40.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Plastic black | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.1C50.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Plastic black | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.1C60.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.1C90.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | C - A - C | C = 45° | 45-2819.3C20.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | C - A - C | C = 45° | 45-2819.3C40.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | C - A - C | C = 45° | 45-2819.3C50.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | C - A - C | C = 45° | 45-2819.3C60.003 | 1 | 0.022 kg |

45 Raised design

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | C - A - C | C = 45° | 45-2819.3C90.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | B - A - B | B = 45° | 45-280S.3C20.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | B - A - B | B = 45° | 45-280S.3C40.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | B - A - B | B = 45° | 45-280S.3C50.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | B - A - B | B = 45° | 45-280S.3C60.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | B - A - B | B = 45° | 45-280S.3C90.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.3C20.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.3C40.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.3C50.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.3C60.003 | 3 | 0.022 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | C - A - B | C = 45°, B = 45° | 45-2816.3C90.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal sandgrey | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.3C20.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal sandgrey | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.3C40.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal sandgrey | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.3C50.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal sandgrey | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.3C60.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | B - A - C | B = 45°, C = 45° | 45-280X.3C90.003 | 4 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2C20.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2C40.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2C50.003 | 1 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2C90.003 | 1 | 0.022 kg |

45 Raised design

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|------------------|-------------------------|----------------|----------|
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C20.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic ambergris | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C30.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic yellow | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C40.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C50.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic blue | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C60.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2C90.003 | 2 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | C - A - B | C = 45°, B = 45° | 45-2816.2C20.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | C - A - B | C = 45°, B = 45° | 45-2816.2C50.003 | 3 | 0.022 kg |
|  | Selector switch actuator 3 positions, short lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | C - A - B | C = 45°, B = 45° | 45-2816.2C90.003 | 3 | 0.022 kg |
| | | | B - A - C | B = 45°, C = 45° | 45-280X.2C90.003 | 4 | 0.022 kg |

Switching action: A = Rest, B = Momentary, C = Maintain

| | | | |
|---|---|--|---|
|  |  |  |  |
| Wiring diagram 1 | Wiring diagram 2 | Wiring diagram 3 | Wiring diagram 4 |

45 Raised design

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



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

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



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)

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---------------|---|------------------|------------------|-----------------|-------------------------|----------------|----------|
| | Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2D20.003 | 1 | 0.022 kg |
| | Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic green | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2D50.003 | 1 | 0.022 kg |
| | Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | C - A - C | C = 45° | 45-2819.2D90.003 | 1 | 0.022 kg |
| | Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic red | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2D20.003 | 2 | 0.022 kg |

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|--|--------------|------------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic green | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2D50.003 | 2 | 0.022 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic white | Metal silver | Metal | B - A - B | B = 45° | 45-280S.2D90.003 | 2 | 0.022 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic red | Metal silver | Metal | C - A - B | C = 45°, B = 45° | 45-2816.2D20.003 | 3 | 0.022 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic white | Metal silver | Metal | C - A - B | C = 45°, B = 45° | 45-2816.2D90.003 | 3 | 0.022 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic red | Metal silver | Metal | B - A - C | B = 45°, C = 45° | 45-280X.2D20.003 | 4 | 0.022 kg |
|  <p>Selector switch actuator 3 positions, long lever, Front dimension Ø 29.45 mm</p> | | | | | | | |
| Plastic white | Metal silver | Metal | B - A - C | B = 45°, C = 45° | 45-280X.2D90.003 | 4 | 0.022 kg |

Switching action: A = Rest, B = Momentary, C = Maintain

| | | | |
|---|---|--|---|
|  |  |  |  |
| Wiring diagram 1 | Wiring diagram 2 | Wiring diagram 3 | Wiring diagram 4 |

45 Raised design

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



Product can differ from the current configuration.



Dimensions [mm]

Additional Information

- Use only with holder for 4 elements
- 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.

| Lever | Front ring | Housing material | Switching action | Switching angle | Part No. | Wiring diagram | Weight |
|---|--|------------------|------------------|-----------------|-------------------------|----------------|----------|
|  | Selector switch actuator 4 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Plastic black | Plastic | C | C = 90° | 45-2845.1E90.002 | 1 | 0.023 kg |
|  | Selector switch actuator 4 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal sandgrey | Plastic | C | C = 90° | 45-2845.3E90.002 | 1 | 0.023 kg |
|  | Selector switch actuator 4 positions, round lever, Front dimension Ø 29.45 mm | | | | | | |
| Plastic white | Metal silver | Metal | C | C = 90° | 45-2845.2E90.002 | 1 | 0.023 kg |

Switching action: C = Maintain



Potentiometer, IP66, IP67, IP69K

Equipment consisting of (schematic overview)



Dimensions [mm]



Product can differ from the current configuration.

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.



Mounting cut-outs [mm]

Additional Information

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

| Product attribute | Front ring | Housing material | Part No. | Component layout | Wiring diagram | Weight |
|---|---------------|------------------|-------------------------|------------------|----------------|---------|
|  <p>Potentiometer, Front dimension Ø 29.45 mm</p> | | | | | | |
| Resistor 1 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P03.1E10.000 | 1 | 1 | 0.03 kg |
| Resistor 4.7 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P04.1E10.000 | 1 | 1 | 0.03 kg |
| Resistor 10 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P02.1E10.000 | 1 | 1 | 0.03 kg |
| Resistor 47 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P06.1E10.000 | 1 | 1 | 0.03 kg |
| Resistor 100 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P01.1E10.000 | 1 | 1 | 0.03 kg |
| Resistor 470 kOhm / linear, series E3 | Plastic black | Plastic | 45-2P05.1E10.000 | 1 | 1 | 0.03 kg |
|  <p>Potentiometer, Front dimension Ø 29.45 mm</p> | | | | | | |
| Resistor 1 kOhm / linear, series E3 | Metal silver | Metal | 45-2P03.2E10.000 | 1 | 1 | 0.03 kg |
| Resistor 4.7 kOhm / linear, series E3 | Metal silver | Metal | 45-2P04.2E10.000 | 1 | 1 | 0.03 kg |
| Resistor 10 kOhm / linear, series E3 | Metal silver | Metal | 45-2P02.2E10.000 | 1 | 1 | 0.03 kg |
| Resistor 47 kOhm / linear, series E3 | Metal silver | Metal | 45-2P06.2E10.000 | 1 | 1 | 0.03 kg |
| Resistor 100 kOhm / linear, series E3 | Metal silver | Metal | 45-2P01.2E10.000 | 1 | 1 | 0.03 kg |
| Resistor 470 kOhm / linear, series E3 | Metal silver | Metal | 45-2P05.2E10.000 | 1 | 1 | 0.03 kg |

The component layouts you will find from Page 144

45 Raised design



Toggle stick, IP 65, IP 67

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

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

| Product attribute | Front ring | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|--|----------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R), lockable | Plastic black | Plastic | B | 45-2F13.1010.000 | 1 | 0.035 kg |
| 2 positions (U-D), lockable | Plastic black | Plastic | B | 45-2F40.1010.000 | 3 | 0.035 kg |
| 4-positions, lockable | Plastic black | Plastic | B | 45-2F14.1010.000 | 5 | 0.035 kg |
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R), lockable | Metal sandgrey | Plastic | B | 45-2F13.3010.000 | 1 | 0.042 kg |
| 2 positions (U-D), lockable | Metal sandgrey | Plastic | B | 45-2F40.3010.000 | 3 | 0.042 kg |
| 4-positions, lockable | Metal sandgrey | Plastic | B | 45-2F14.3010.000 | 5 | 0.042 kg |
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R), lockable | Metal silver | Metal | B | 45-2F13.2010.000 | 1 | 0.081 kg |
| 2 positions (U-D), lockable | Metal silver | Metal | B | 45-2F40.2010.000 | 3 | 0.081 kg |
| 4-positions, lockable | Metal silver | Metal | B | 45-2F14.2010.000 | 5 | 0.081 kg |

45 Raised design

| Product attribute | Front ring | Housing material | Switching action | Part No. | Wiring diagram | Weight |
|---|----------------|------------------|------------------|-------------------------|----------------|----------|
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R) | Plastic black | Plastic | B | 45-2F0T.1010.000 | 1 | 0.035 kg |
| 2 positions (U-D) | Plastic black | Plastic | B | 45-2F38.1010.000 | 3 | 0.035 kg |
| 4 positions | Plastic black | Plastic | B | 45-2F0V.1010.000 | 5 | 0.035 kg |
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R) | Metal sandgrey | Plastic | B | 45-2F0T.3010.000 | 1 | 0.042 kg |
| 2 positions (U-D) | Metal sandgrey | Plastic | B | 45-2F38.3010.000 | 3 | 0.042 kg |
| 4 positions | Metal sandgrey | Plastic | B | 45-2F0V.3010.000 | 5 | 0.042 kg |
|  <p>Toggle stick, Front dimension Ø 29.45 mm</p> | | | | | | |
| 2 positions (L-R) | Metal silver | Metal | B | 45-2F0T.2010.000 | 1 | 0.081 kg |
| 2 positions (U-D) | Metal silver | Metal | B | 45-2F38.2010.000 | 3 | 0.081 kg |
| 4 positions | Metal silver | Metal | B | 45-2F0V.2010.000 | 5 | 0.081 kg |

Switching action: B = Momentary



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»

| Product attribute | Lever | Front ring | Switching action | Part No. | Wiring diagram | Weight |
|--|---------------|----------------|------------------|-------------------------|----------------|----------|
|  <p>Toggle switch actuator, Front dimension Ø 29.45 mm</p> | | | | | | |
| reset from above | Plastic black | Plastic black | C | 45-2N42.1010.000 | 1 | 0.015 kg |
| – | Plastic black | Plastic black | B | 45-2N39.1010.000 | 2 | 0.015 kg |
|  <p>Toggle switch actuator, Front dimension Ø 29.45 mm</p> | | | | | | |
| reset from above | Plastic black | Metal sandgrey | C | 45-2N42.3010.000 | 1 | 0.020 kg |
| – | Plastic black | Metal sandgrey | B | 45-2N39.3010.000 | 2 | 0.020 kg |
|  <p>Toggle switch actuator, Front dimension Ø 29.45 mm</p> | | | | | | |
| reset from above | Plastic black | Metal silver | C | 45-2N42.2010.000 | 1 | 0.038 kg |
| – | Plastic black | Metal silver | B | 45-2N39.2010.000 | 2 | 0.038 kg |

Switching action: B = Momentary, C = Maintain

| | |
|------------------|------------------|
| | |
| Wiring diagram 1 | Wiring diagram 2 |

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 transparent | 45-553.0E00 | 0.001 kg |

| Dimension | Lens | Part No. | Weight |
|---|--------------------------------|--------------------|----------|
|  | Lens | | |
| Ø 23.7 mm | Plastic amber transparent | 45-553.0F00 | 0.001 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic yellow transparent | 45-553.0G00 | 0.001 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic green transparent | 45-553.0H00 | 0.001 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic blue transparent | 45-553.0J00 | 0.001 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic white transparent | 45-553.0K00 | 0.001 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic colourless transparent | 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 |

| 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 transparent | 45-552.0E00 | 0.002 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic yellow transparent | 45-552.0G00 | 0.002 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic green transparent | 45-552.0H00 | 0.002 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic blue transparent | 45-552.0J00 | 0.002 kg |
|  | Lens | | |
| Ø 23.7 mm | Plastic colourless transparent | 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

Additional Information

- Markable, see «Marking»



Dimensions [mm]

| Product attribute | Dimension | Material | Colour | Part No. | Weight |
|---|--------------|----------|--------|--------------------|----------|
|  <p>Legend plate</p> | | | | | |
| For sticking or snapping in place | 27 x 12.5 mm | Plastic | black | 45-573.1102 | 0.001 kg |
| For sticking or snapping in place | 27 x 12.5 mm | Plastic | red | 45-573.1202 | 0.001 kg |
| For sticking or snapping in place | 27 x 12.5 mm | Plastic | silver | 45-573.1A02 | 0.001 kg |
|  <p>Legend plate</p> | | | | | |
| For sticking or snapping in place | 27 x 17.5 mm | Plastic | black | 45-573.1103 | 0.001 kg |
| For sticking or snapping in place | 27 x 17.5 mm | Plastic | silver | 45-573.1A03 | 0.001 kg |
|  <p>Legend plate</p> | | | | | |
| For sticking or snapping in place | 27 x 27 mm | Plastic | black | 45-573.1105 | 0.001 kg |
| For sticking or snapping in place | 27 x 27 mm | Plastic | silver | 45-573.1A05 | 0.001 kg |
|  <p>Legend plate</p> | | | | | |
| For sticking or snapping in place | 22 x 22 mm | Plastic | silver | 45-573.1A04 | 0.001 kg |
| For sticking | 22 x 22 mm | Plastic | black | 45-573.1104 | 0.001 kg |

Emergency-stop legend

Additional Information

- Front panel thickness 3 mm max.

| Product attribute | Dimension | Mounting cut-out | Marking | Colour | Part No. | Weight |
|---|------------------------------|------------------|-----------------|--------|--------------------|----------|
|  | Emergency-stop legend | | | | | |
| - | Ø 45 x 1 mm | Ø 22.5 mm | without marking | yellow | 45-50K.1407 | 0.005 kg |
|  | Emergency-stop legend | | | | | |
| - | Ø 75 x 1 mm | Ø 22.5 mm | without marking | yellow | 45-50K.1408 | 0.010 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | without marking | yellow | 45-50J.1400 | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | NOT - HALT | yellow | 45-50J.140Q | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | EMERGENCY STOP | yellow | 45-50J.140S | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | NOT - AUS | yellow | 45-50J.140P | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | ARRET D'URGENCE | yellow | 45-50J.140T | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | EMERGENZA | yellow | 45-50J.140V | 0.004 kg |
|  | Emergency-stop legend | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | NODSTOP | yellow | 45-50J.140W | 0.004 kg |

| Product attribute | Dimension | Mounting cut-out | Marking | Colour | Part No. | Weight |
|---|-------------|------------------|---|--------|--------------------|----------|
|  <p>Emergency-stop legend</p> | | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | 紧急停止 | yellow | 45-50J.140X | 0.004 kg |
|  <p>Emergency-stop legend</p> | | | | | | |
| self-adhesive | Ø 75 x 1 mm | Ø 23 mm | NOT-HALT EMERGENCY STOP EMERGENZA EMERGENCIA | yellow | 45-50J.140Z | 0.004 kg |
|  <p>Emergency-stop legend</p> | | | | | | |
| self-adhesive | 150 x 38 mm | Ø 23 mm | without marking | yellow | 45-561.1400 | 0.004 kg |
|  <p>Emergency-stop legend</p> | | | | | | |
| self-adhesive | 150 x 38 mm | Ø 23 mm | NOT - AUS | yellow | 45-561.140P | 0.004 kg |
|  <p>Emergency-stop legend</p> | | | | | | |
| self-adhesive | 150 x 38 mm | Ø 23 mm | without marking | yellow | 45-562.1400 | 0.004 kg |

Legend plate for potentiometer

| Dimension | Material | Colour | Part No. | Weight |
|--|----------|--------|--------------------|----------|
|  <p>Legend plate for potentiometer</p> | | | | |
| Ø 40 mm | Plastic | black | 45-538.1100 | 0.001 kg |

Legend support without legend

Additional Information

- For sticking or snapping in place



| Product attribute | Material | Colour | Part No. | Weight |
|---|----------|--------|--------------------|----------|
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 12.5 mm | Plastic | black | 45-564.1102 | 0.002 kg |
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 17.5 mm | Plastic | black | 45-567.1103 | 0.002 kg |
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 27 mm | Plastic | black | 45-569.1105 | 0.002 kg |

| Product attribute | Material | Colour | Part No. | Weight |
|---|----------|--------|--------------------|----------|
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 27 mm | Plastic | black | 45-570.1105 | 0.002 kg |
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 12.5 mm | Plastic | black | 45-564.1110 | 0.002 kg |
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 x 17.5 mm | Plastic | black | 45-567.1111 | 0.002 kg |
|  <p>Legend support without legend</p> | | | | |
| for legend plate 27 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 plate 27 x 27 mm | Plastic | black | 45-571.1105 | 0.002 kg |
|  <p>Legend support without legend for toggle stick</p> | | | | |
| for legend plate 27 x 27 mm | Plastic | black | 45-572.1105 | 0.002 kg |

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 |

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 | Metall/Kunststoff | 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]

| Product attribute | Material | Colour | Part No. | Weight |
|---|---------------------------------|--------|--------------------|----------|
|  | E-stop protective shroud | | | |
| non-illuminative | Plastic | yellow | 45-549.1400 | 0.052 kg |
|  | E-stop protective shroud | | | |
| non-illuminative | Plastic | grey | 45-549.1800 | 0.052 kg |
|  | E-stop protective shroud | | | |
| non-illuminative | Plastic | yellow | 45-550.1400 | 0.044 kg |
|  | E-stop protective shroud | | | |
| for Emergency stop switch Ø 40 mm, for 5 padlocks | Metal | yellow | 45-539.2400 | 0.162 kg |
|  | E-stop protective shroud | | | |
| for Emergency stop switch Ø 40 mm, for 5 padlocks | Metal | grey | 45-539.2800 | 0.153 kg |



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 22.5 mm | Plastic | black | 45-506.1100 | 0.010 kg |
|  <p>Blind plug</p> | | | | |
| Ø 22.5 mm | Metal sandgrey | silver | 45-506.3A00 | 0.008 kg |
|  <p>Blind plug</p> | | | | |
| Ø 22.5 mm | Metal shiny | silver | 45-506.2A00 | 0.038 kg |

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 |

Spare key

Additional Information

- For standard lock RONIS T254

| Product attribute | Part No. | Weight |
|---|-------------|----------|
|  <p>Spare key</p> | 45-522.0900 | 0.007 kg |
| 2 spare keys | | |

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 145

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 145

Switching element front mounting



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

| Switching current | Contacts | Contact material | Terminal | Part No. | Wiring diagram | Weight |
|---|----------|------------------|----------------------|--------------------|----------------|----------|
|  <p>Switching element</p> | | | | | | |
| 10 A | 1 NO | Silver | Screw | 45-311.1Z10 | 1 | 0.010 kg |
| 10 A | 1 NC | Silver | Screw | 45-312.1Z10 | 2 | 0.010 kg |
|  <p>Switching element</p> | | | | | | |
| 10 A | 1 NO | Silver | Spring-type terminal | 45-311.1Z40 | 1 | 0.010 kg |
| 10 A | 1 NC | Silver | Spring-type terminal | 45-312.1Z40 | 2 | 0.010 kg |



Switching element base mounting



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

| Switching current | Contacts | Contact material | Terminal | Part No. | Wiring diagram | Weight |
|---|--------------------------|------------------|----------------------|--------------------|----------------|----------|
|  | Switching element | | | | | |
| 10 A | 1 NO | Silver | Screw | 45-311.2Z10 | 1 | 0.010 kg |
|  | Switching element | | | | | |
| 10 A | 1 NC | Silver | Screw | 45-312.2Z10 | 2 | 0.010 kg |
|  | Switching element | | | | | |
| 10 A | 1 NO | Silver | Spring-type terminal | 45-311.2Z40 | 1 | 0.010 kg |
|  | Switching element | | | | | |
| 10 A | 1 NC | Silver | Spring-type terminal | 45-312.2Z40 | 2 | 0.010 kg |





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

| LED colour | Operating voltage | Lumi. intensity | Terminal | Part No. | Wiring dia-gram | Weight |
|--|-------------------|-----------------|----------|--------------------|-----------------|----------|
|  <p style="text-align: center;">Illumination element</p> | | | | | | |
| red | 6-24 VAC/DC | 450...1120 mcd | Screw | 45-320.1E11 | 1 | 0.009 kg |
| amber | 6-24 VAC/DC | 450...1120 mcd | Screw | 45-320.1F11 | 1 | 0.009 kg |
| yellow | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.1G11 | 1 | 0.009 kg |
| green | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.1H11 | 1 | 0.009 kg |
| blue | 6-24 VAC/DC | 280...710 mcd | Screw | 45-320.1J11 | 1 | 0.009 kg |
| white | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.1N11 | 1 | 0.009 kg |
| red | 24-240 VAC/DC | 450...1120 mcd | Screw | 45-320.1E12 | 1 | 0.010 kg |
| amber | 24-240 VAC/DC | 450...1120 mcd | Screw | 45-320.1F12 | 1 | 0.010 kg |
| yellow | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.1G12 | 1 | 0.010 kg |
| green | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.1H12 | 1 | 0.010 kg |
| blue | 24-240 VAC/DC | 280...710 mcd | Screw | 45-320.1J12 | 1 | 0.010 kg |
| white | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.1N12 | 1 | 0.010 kg |
| red | 24 VAC/DC | 450...1120 mcd | Screw | 45-320.1E16 | 1 | 0.009 kg |
| amber | 24 VAC/DC | 450...1120 mcd | Screw | 45-320.1F16 | 1 | 0.009 kg |
| yellow | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.1G16 | 1 | 0.009 kg |
| green | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.1H16 | 1 | 0.009 kg |
| blue | 24 VAC/DC | 280...710 mcd | Screw | 45-320.1J16 | 1 | 0.009 kg |
| white | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.1N16 | 1 | 0.009 kg |
| red | 110 VAC | 450...1120 mcd | Screw | 45-320.1E17 | 1 | 0.010 kg |
| amber | 110 VAC | 450...1120 mcd | Screw | 45-320.1F17 | 1 | 0.010 kg |
| yellow | 110 VAC | 900...1400 mcd | Screw | 45-320.1G17 | 1 | 0.010 kg |
| green | 110 VAC | 900...1400 mcd | Screw | 45-320.1H17 | 1 | 0.010 kg |
| blue | 110 VAC | 280...710 mcd | Screw | 45-320.1J17 | 1 | 0.010 kg |
| white | 110 VAC | 900...1400 mcd | Screw | 45-320.1N17 | 1 | 0.010 kg |

| LED colour | Operating voltage | Lumi. intensity | Terminal | Part No. | Wiring diagram | Weight |
|------------|-------------------|-----------------|----------|--------------------|----------------|----------|
| red | 230 VAC | 450...1120 mcd | Screw | 45-320.1E18 | 1 | 0.010 kg |
| amber | 230 VAC | 450...1120 mcd | Screw | 45-320.1F18 | 1 | 0.010 kg |
| yellow | 230 VAC | 900...1400 mcd | Screw | 45-320.1G18 | 1 | 0.010 kg |
| green | 230 VAC | 900...1400 mcd | Screw | 45-320.1H18 | 1 | 0.010 kg |
| blue | 230 VAC | 280...710 mcd | Screw | 45-320.1J18 | 1 | 0.010 kg |
| white | 230 VAC | 900...1400 mcd | Screw | 45-320.1N18 | 1 | 0.010 kg |



Illumination element

| | | | | | | |
|--------|---------------|----------------|----------------------|--------------------|---|----------|
| red | 6-24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1E41 | 1 | 0.009 kg |
| amber | 6-24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1F41 | 1 | 0.009 kg |
| yellow | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1G41 | 1 | 0.009 kg |
| green | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1H41 | 1 | 0.009 kg |
| blue | 6-24 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.1J41 | 1 | 0.009 kg |
| white | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1N41 | 1 | 0.009 kg |
| red | 24-240 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1E42 | 1 | 0.010 kg |
| amber | 24-240 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1F42 | 1 | 0.010 kg |
| yellow | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1G42 | 1 | 0.010 kg |
| green | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1H42 | 1 | 0.010 kg |
| blue | 24-240 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.1J42 | 1 | 0.010 kg |
| white | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1N42 | 1 | 0.010 kg |
| red | 24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1E46 | 1 | 0.009 kg |
| amber | 24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.1F46 | 1 | 0.009 kg |
| yellow | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1G46 | 1 | 0.009 kg |
| green | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1H46 | 1 | 0.009 kg |
| blue | 24 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.1J46 | 1 | 0.009 kg |
| white | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.1N46 | 1 | 0.009 kg |
| red | 110 VAC | 450...1120 mcd | Spring-type terminal | 45-320.1E47 | 1 | 0.010 kg |
| amber | 110 VAC | 450...1120 mcd | Spring-type terminal | 45-320.1F47 | 1 | 0.010 kg |
| yellow | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1G47 | 1 | 0.010 kg |
| green | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1H47 | 1 | 0.010 kg |
| blue | 110 VAC | 280...710 mcd | Spring-type terminal | 45-320.1J47 | 1 | 0.010 kg |
| white | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1N47 | 1 | 0.010 kg |
| red | 230 VAC | 450...1120 mcd | Spring-type terminal | 45-320.1E48 | 1 | 0.010 kg |
| amber | 230 VAC | 450...1120 mcd | Spring-type terminal | 45-320.1F48 | 1 | 0.010 kg |
| yellow | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1G48 | 1 | 0.010 kg |
| green | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1H48 | 1 | 0.010 kg |
| blue | 230 VAC | 280...710 mcd | Spring-type terminal | 45-320.1J48 | 1 | 0.010 kg |
| white | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.1N48 | 1 | 0.010 kg |



Wiring diagram 1

Illumination element base mounting



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

| LED colour | Operating voltage | Lumi. intensity | Terminal | Part No. | Wiring dia-gram | Weight |
|---|-----------------------------|-----------------|----------|--------------------|-----------------|----------|
|  | Illumination element | | | | | |
| red | 6-24 VAC/DC | 450...1120 mcd | Screw | 45-320.2E11 | 1 | 0.009 kg |
| amber | 6-24 VAC/DC | 450...1120 mcd | Screw | 45-320.2F11 | 1 | 0.009 kg |
| yellow | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.2G11 | 1 | 0.009 kg |
| green | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.2H11 | 1 | 0.009 kg |
| blue | 6-24 VAC/DC | 280...710 mcd | Screw | 45-320.2J11 | 1 | 0.009 kg |
| white | 6-24 VAC/DC | 900...1400 mcd | Screw | 45-320.2N11 | 1 | 0.009 kg |
| red | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.2E12 | 1 | 0.009 kg |
| amber | 24-240 VAC/DC | 450...1120 mcd | Screw | 45-320.2F12 | 1 | 0.009 kg |
| yellow | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.2G12 | 1 | 0.009 kg |
| green | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.2H12 | 1 | 0.009 kg |
| blue | 24-240 VAC/DC | 280...710 mcd | Screw | 45-320.2J12 | 1 | 0.009 kg |
| white | 24-240 VAC/DC | 900...1400 mcd | Screw | 45-320.2N12 | 1 | 0.009 kg |
| red | 24 VAC/DC | 450...1120 mcd | Screw | 45-320.2E16 | 1 | 0.009 kg |
| amber | 24 VAC/DC | 450...1120 mcd | Screw | 45-320.2F16 | 1 | 0.009 kg |
| yellow | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.2G16 | 1 | 0.009 kg |
| green | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.2H16 | 1 | 0.009 kg |
| blue | 24 VAC/DC | 280...710 mcd | Screw | 45-320.2J16 | 1 | 0.009 kg |
| white | 24 VAC/DC | 900...1400 mcd | Screw | 45-320.2N16 | 1 | 0.009 kg |
| red | 110 VAC | 450...1120 mcd | Screw | 45-320.2E17 | 1 | 0.009 kg |
| amber | 110 VAC | 450...1120 mcd | Screw | 45-320.2F17 | 1 | 0.009 kg |
| yellow | 110 VAC | 900...1400 mcd | Screw | 45-320.2G17 | 1 | 0.009 kg |
| green | 110 VAC | 900...1400 mcd | Screw | 45-320.2H17 | 1 | 0.009 kg |
| blue | 110 VAC | 280...710 mcd | Screw | 45-320.2J17 | 1 | 0.009 kg |
| white | 110 VAC | 900...1400 mcd | Screw | 45-320.2N17 | 1 | 0.009 kg |

| LED colour | Operating voltage | Lichtstärke | Terminal | Part No. | Wiring diagram | Weight |
|------------|-------------------|----------------|----------|--------------------|----------------|----------|
| red | 230 VAC | 450...1120 mcd | Screw | 45-320.2E18 | 1 | 0.009 kg |
| amber | 230 VAC | 450...1120 mcd | Screw | 45-320.2F18 | 1 | 0.009 kg |
| yellow | 230 VAC | 900...1400 mcd | Screw | 45-320.2G18 | 1 | 0.009 kg |
| green | 230 VAC | 900...1400 mcd | Screw | 45-320.2H18 | 1 | 0.009 kg |
| blue | 230 VAC | 280...710 mcd | Screw | 45-320.2J18 | 1 | 0.009 kg |
| white | 230 VAC | 900...1400 mcd | Screw | 45-320.2N18 | 1 | 0.009 kg |



Illumination element

| | | | | | | |
|--------|---------------|----------------|----------------------|--------------------|---|----------|
| red | 6-24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2E41 | 1 | 0.009 kg |
| amber | 6-24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2F41 | 1 | 0.009 kg |
| yellow | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2G41 | 1 | 0.009 kg |
| green | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2H41 | 1 | 0.009 kg |
| blue | 6-24 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.2J41 | 1 | 0.009 kg |
| white | 6-24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2N41 | 1 | 0.009 kg |
| red | 24-240 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2E42 | 1 | 0.009 kg |
| amber | 24-240 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2F42 | 1 | 0.009 kg |
| yellow | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2G42 | 1 | 0.009 kg |
| green | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2H42 | 1 | 0.009 kg |
| blue | 24-240 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.2J42 | 1 | 0.009 kg |
| white | 24-240 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2N42 | 1 | 0.009 kg |
| red | 24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2E46 | 1 | 0.009 kg |
| amber | 24 VAC/DC | 450...1120 mcd | Spring-type terminal | 45-320.2F46 | 1 | 0.009 kg |
| yellow | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2G46 | 1 | 0.009 kg |
| green | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2H46 | 1 | 0.009 kg |
| blue | 24 VAC/DC | 280...710 mcd | Spring-type terminal | 45-320.2J46 | 1 | 0.009 kg |
| white | 24 VAC/DC | 900...1400 mcd | Spring-type terminal | 45-320.2N46 | 1 | 0.009 kg |
| red | 110 VAC | 450...1120 mcd | Spring-type terminal | 45-320.2E47 | 1 | 0.009 kg |
| amber | 110 VAC | 450...1120 mcd | Spring-type terminal | 45-320.2F47 | 1 | 0.009 kg |
| yellow | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2G47 | 1 | 0.009 kg |
| green | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2H47 | 1 | 0.009 kg |
| blue | 110 VAC | 280...710 mcd | Spring-type terminal | 45-320.2J47 | 1 | 0.009 kg |
| white | 110 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2N47 | 1 | 0.009 kg |
| red | 230 VAC | 450...1120 mcd | Spring-type terminal | 45-320.2E48 | 1 | 0.009 kg |
| amber | 230 VAC | 450...1120 mcd | Spring-type terminal | 45-320.2F48 | 1 | 0.009 kg |
| yellow | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2G48 | 1 | 0.009 kg |
| green | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2H48 | 1 | 0.009 kg |
| blue | 230 VAC | 280...710 mcd | Spring-type terminal | 45-320.2J48 | 1 | 0.009 kg |
| white | 230 VAC | 900...1400 mcd | Spring-type terminal | 45-320.2N48 | 1 | 0.009 kg |



Wiring diagram 1

Illumination element PCB mounting



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

| LED colour | Operating voltage | Terminal | Part No. | Wiring diagram | Weight |
|--|-------------------|--------------|--------------------|----------------|----------|
|  <p style="text-align: center;">Illumination element</p> | | | | | |
| red | 5 VDC | PCB terminal | 45-320.3E60 | 1 | 0.009 kg |
| amber | 5 VDC | PCB terminal | 45-320.3F60 | 1 | 0.009 kg |
| yellow | 5 VDC | PCB terminal | 45-320.3G60 | 1 | 0.009 kg |
| green | 5 VDC | PCB terminal | 45-320.3H60 | 1 | 0.009 kg |
| blue | 5 VDC | PCB terminal | 45-320.3J60 | 1 | 0.009 kg |
| white | 5 VDC | PCB terminal | 45-320.3N60 | 1 | 0.009 kg |



Test module



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

| Product attribute | Operating voltage | Terminal | Part No. | Wiring diagram | Weight |
|---|-------------------|----------|--------------------|----------------|----------|
|  <p>Test module front mounting</p> | | | | | |
| front plate mounting | 12-240 VAC/DC | Screw | 45-330.1115 | 1 | 0.011 kg |
|  <p>Test module base mounting</p> | | | | | |
| base mounting | 12-240 VAC/DC | Screw | 45-330.2115 | 1 | 0.011 kg |



Extension plungers

| Product attribute | Material | Colour | Part No. | Weight |
|--|----------|--------|--------------------|----------|
|  <p>Extension plungers</p> | | | | |
| 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 |
|  <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 |

Connection piece, IP 68

| Product attribute | Thread | Material | Colour | Part No. | Weight |
|---|---------|----------|--------|--------------------|----------|
|  Connection piece | | | | | |
| for connecting 2 enclosures, with hexagonal nut | M20/M20 | Plastic | black | 45-50C.1900 | 0.050 kg |
|  Connection piece | | | | | |
| for connecting 2 enclosures, with hexagonal nut | M20/M25 | Plastic | black | 45-50D.1900 | 0.055 kg |
|  Connection piece | | | | | |
| for connecting 2 enclosures, with hexagonal nut | M25/M25 | Plastic | black | 45-50E.1900 | 0.060 kg |
|  Connection piece | | | | | |
| for connecting 2 enclosures, with hexagonal nut | M20/M20 | Metal | silver | 45-50C.2900 | 0.055 kg |
|  Connection piece | | | | | |
| for connecting 2 enclosures, with hexagonal nut | M20/M25 | Metal | silver | 45-50D.2900 | 0.075 kg |
|  Connection piece | | | | | |
| 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 |
|---|----------|--------|--------------------|----------|
|  Enclosure cover monitoring | | | | |
| with extension plungers | Plastic | black | 45-50G.0900 | 0.007 kg |

Drawings



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)



Indicator full face illumination (raised design)



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



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



Pushbutton, lens lower than front ring (raised design)



45 Drawings

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 \varnothing 40 mm
(raised design)



Emergency stop switch, Stop switch \varnothing 40 mm
(raised design)



Emergency stop switch \varnothing 60 mm (raised design)



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



45 Drawings

Stop switch \varnothing 29.5 mm (raised design)



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 Ø 60 mm (raised design)



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

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

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

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

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:

3K6, 3C3, 3S2, 3M6

Approvals

Approbations

CCC

CSA

UL

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 |
| | | 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 | | |

45 Marking

Standard texts for legend plates black, 27 x 17.5 mm

| | | |
|----------------|---|-----------------------------|
| Example |  | Part No. 45-573.1103.T00028 |
|----------------|---|-----------------------------|

| 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 |
|----------------|---|-----------------------------|

| Standard texts German | | Standard texts English | |
|-----------------------|-----------------------------|------------------------|-----------------------------|
| Ein | Part No. 45-573.1A03.T00001 | On | Part No. 45-573.1A03.T00020 |
| Aus | Part No. 45-573.1A03.T00002 | Off | Part No. 45-573.1A03.T00021 |
| Auf | Part No. 45-573.1A03.T00003 | Stop | Part No. 45-573.1A03.T00028 |
| Ab | Part No. 45-573.1A03.T00004 | Start | Part No. 45-573.1A03.T00029 |
| Vor | Part No. 45-573.1A03.T00005 | Reset | Part No. 45-573.1A03.T00030 |
| Zurück | Part No. 45-573.1A03.T00006 | Fault | Part No. 45-573.1A03.T00036 |
| Rechts | Part No. 45-573.1A03.T00007 | Man O Auto | Part No. 45-573.1A03.T00043 |
| Halt | Part No. 45-573.1A03.T00009 | | |
| 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 |
|----------------|---|-----------------------------|

| 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.T00024 | 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 |
|---|-----------------------------|---|--|

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 Contact.

Your centre of excellence.

Headquarters

EAO Holding AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
info@eao.com

Manufacturing Companies

Switzerland
EAO AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
info@eao.com

EAO Systems AG
Tannwaldstrasse 88
CH-4600 Olten
Telephone +41 62 286 91 11
sales.esy@eao.com

China
EAO (Guangzhou) Ltd.
3/F, Block G4, South China
New Materials Innovation Park
31 Kefeng Road,
Guangzhou Science City,
CN-Guangzhou, PRC
Telephone +86 20 3229 0390
sales.ecn@eao.com

Germany
EAO Automotive GmbH & Co. KG
Richard-Wagner-Straße 3
DE-08209 Auerbach/Vogtland
Telephone +49 3744 8264 0
sales.esa@eao.com

North America
EAO Corporation
One Parrott Drive
Shelton
US-CT 06484
Telephone +1 203 951 4600
sales.us@eao.com

Sales Companies

China
EAO (Guangzhou) Ltd.
3/F, Block G4, South China
New Materials Innovation Park
31 Kefeng Road,
Guangzhou Science City,
CN-Guangzhou, PRC
Telephone +86 20 3229 0390
sales.ecn@eao.com

EAO (Shanghai) Office
Rm. 403, Block 5#,
CIFI Century Square, Lane 28,
NO. 21, Danba Road,
Putuo District
CN-Shanghai PRC
Telephone +86 21 6095 0717
sales.ecn@eao.com

France
EAO France SAS
5, rue Henri François
FR-77330 Ozoir-la-Ferrière
Telephone +33 1 64 43 37 37
sales.efr@eao.com

**Germany, Austria,
Poland, Czech Republic**
EAO GmbH
Langenberger Straße 570
DE-45277 Essen
Telephone +49 201 8587 0
sales.ede@eao.com

Hong Kong (Asia Pacific)
EAO (Far East) Ltd.
Unit A1, 1/F, Block A
Tin On Industrial Building
777 Cheung Sha Wan Road
Lai Chi Kok, Kln
HK-Hong Kong
Telephone +852 27 86 91 41
sales.ehk@eao.com

Italy
EAO Italia S.r.l.
Centro Direzionale Summit –
Palazzo D1
Via Brescia, 28
IT-20063 Cernusco sul Naviglio (MI)
Telephone +39 02 92 471934
sales.eit@eao.com

Japan
EAO Japan Co. Ltd.
Net 1 Mita Bldg. 3F
3-1-4 Mita Minato-ku
JP-Tokyo 108-0073
Telephone +81 3 5444 5411
sales.ejp@eao.com

Netherlands, Belgium
EAO Benelux B.V.
Kamerlingh Onnesweg 46
NL-3316 GL Dordrecht
Telephone +31 78 653 17 00
sales.enl@eao.com

North America
EAO Corporation
One Parrott Drive
Shelton
US-CT 06484
Telephone +1 203 951 4600
sales.us@eao.com

Sweden
EAO Svenska AB
Box 7032
SE-121 07 Stockholm-Globen
Telephone +46 8 683 86 60
sales.esw@eao.se

Switzerland
EAO Schweiz AG
Tannwaldstrasse 86
CH-4600 Olten
Telephone +41 62 286 95 00
sales.ech@eao.com

United Kingdom
EAO Ltd.
Highland House
Albert Drive
Burgess Hill
GB-West Sussex RH15 9TN
Telephone +44 1444 236 000
sales.euk@eao.com



Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

Наши контакты:

Телефон: +7 812 627 14 35

Электронная почта: sales@st-electron.ru

Адрес: 198099, Санкт-Петербург,
Промышленная ул, дом № 19, литера Н,
помещение 100-Н Офис 331