

Series
45
Catalogue

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Series 45.

Modular, aesthetic and robust in use.



Innovative and comprehensive *Series 45*

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

Robust industrial control system

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

High level of modularity

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

Full functionality

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

Major benefits

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

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45 Numbering structure

Indicator

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

Actuator

T = Indicator

Function

00 = Full face illumination

07 = Front illumination

Material

1 = Plastic

2 = Metal

3 = Metal/plastic

4 = Metal/matt

Shape of handle or front ring

F = flush

0 = raised

Colour

E = red transparent

F = amber transparent

G = yellow transparent

H = green transparent

J = blue transparent

K = colourless transparent

N = white transparent

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 castallations

F = flush

Colour

E = red transparent

F = amber transparent

G = yellow transparent

H = green transparent

J = blue transparent

K = colourless transparent

N = white transparent

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

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

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

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 green	Metal sandgrey	A - C	C = 90°	45-2828.4C50.001	2	0.055 kg
 Selector switch actuator 2 positions, short lever, Front dimension Ø 38 mm						
Plastic white	Metal sandgrey	A - C	C = 90°	45-2828.4C90.001	2	0.055 kg

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

	
Wiring diagram 1	Wiring diagram 2

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 green	Metal sandgrey	A - C	C = 90°	45-2828.4D50.001	2	0.055 kg
 Selector switch actuator 2 positions, long lever, Front dimension Ø 38 mm						
Plastic white	Metal sandgrey	A - C	C = 90°	45-2828.4D90.001	2	0.055 kg

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

	
Wiring diagram 1	Wiring diagram 2

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 green	Metal sandgrey	B - A - B	B = 45°	45-280S.4C50.003	2	0.055 kg
 Selector switch actuator 3 positions, short lever, Front dimension Ø 38 mm						
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

	
Wiring diagram 1	Wiring diagram 2

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 green	Metal sandgrey	B - A - B	B = 45°	45-280S.4D50.003	2	0.055 kg
 Selector switch actuator 3 positions, long lever, Front dimension Ø 38 mm						
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

 Wiring diagram 1	 Wiring diagram 2
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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.

