

Series  
**45**  
*Catalogue*

[www.eao.com](http://www.eao.com)

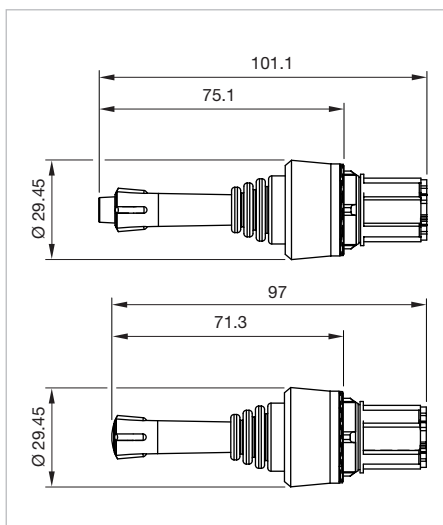


# 45 Raised design

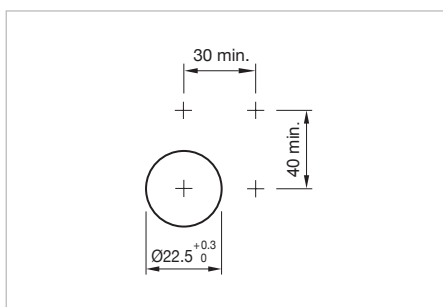
## Toggle stick, IP 65



Product can differ from the current configuration.

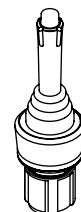


Dimensions [mm]

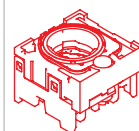


Mounting cut-outs [mm]

### Equipment consisting of (schematic overview)



Actuator



Holder

Page 111









Switching element

Page 112

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

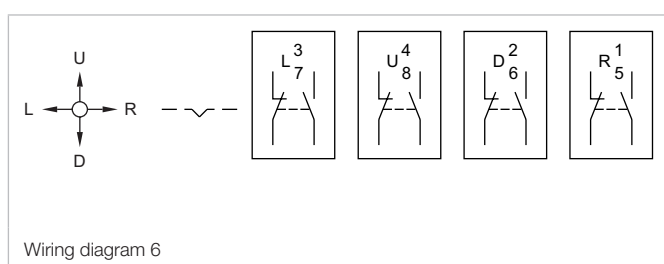
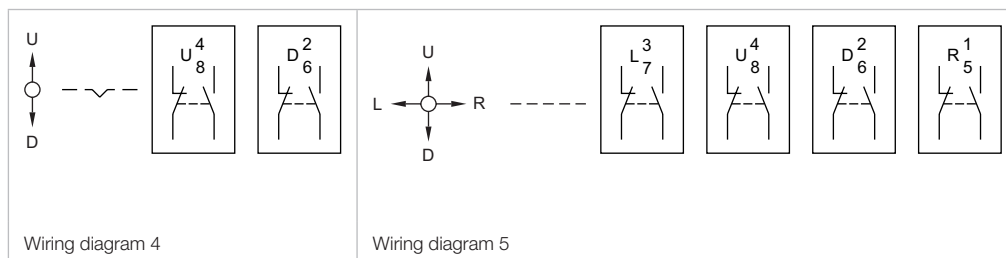
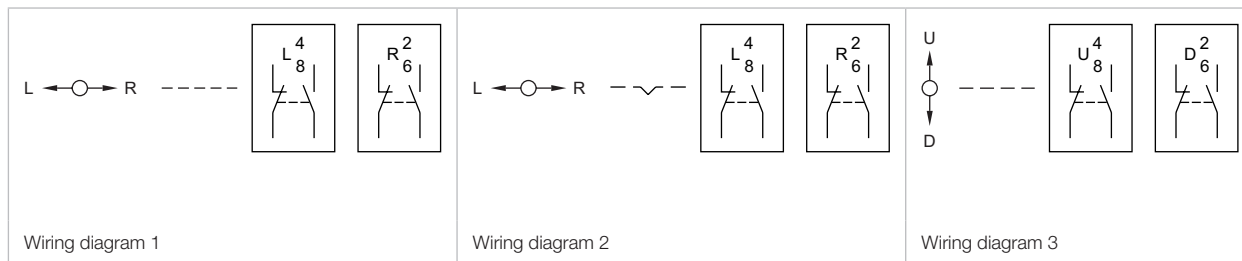
To obtain a complete unit, please select the red components from the pages shown.

Product attribute	Front ring	Housing material	Switching action	Part No.	Wiring diagram	Weight
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position, lockable	Plastic black	Plastic	B	<b>45-2F13.1010.000</b>	1	0.035 kg
2 positions (LR) with latch position, lockable	Plastic black	Plastic	C	<b>45-2F26.1010.000</b>	2	0.035 kg
2 positions (U-D) without latch position, lockable	Plastic black	Plastic	B	<b>45-2F40.1010.000</b>	3	0.035 kg
2 positions (UD) with latch position, lockable	Plastic black	Plastic	C	<b>45-2F43.1010.000</b>	4	0.035 kg
4 positions without latch position, lockable	Plastic black	Plastic	B	<b>45-2F14.1010.000</b>	5	0.035 kg
4 positions with latch position, lockable	Plastic black	Plastic	C	<b>45-2F27.1010.000</b>	6	0.035 kg
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position, lockable	Metal sandgrey	Plastic	B	<b>45-2F13.3010.000</b>	1	0.042 kg
2 positions (LR) with latch position, lockable	Metal sandgrey	Plastic	C	<b>45-2F26.3010.000</b>	2	0.042 kg
2 positions (U-D) without latch position, lockable	Metal sandgrey	Plastic	B	<b>45-2F40.3010.000</b>	3	0.042 kg
2 positions (UD) with latch position, lockable	Metal sandgrey	Plastic	C	<b>45-2F43.3010.000</b>	4	0.042 kg
4 positions without latch position, lockable	Metal sandgrey	Plastic	B	<b>45-2F14.3010.000</b>	5	0.042 kg
4 positions with latch position, lockable	Metal sandgrey	Plastic	C	<b>45-2F27.3010.000</b>	6	0.042 kg

Product attribute	Front ring	Housing material	Switching action	Part No.	Wiring diagram	Weight
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position, lockable	Metal silver	Metal	B	<b>45-2F13.2010.000</b>	1	0.081 kg
2 positions (LR) with latch position, lockable	Metal silver	Metal	C	<b>45-2F26.2010.000</b>	2	0.081 kg
2 positions (U-D) without latch position, lockable	Metal silver	Metal	B	<b>45-2F40.2010.000</b>	3	0.081 kg
2 positions (UD) with latch position, lockable	Metal silver	Metal	C	<b>45-2F43.2010.000</b>	4	0.081 kg
4 positions without latch position, lockable	Metal silver	Metal	B	<b>45-2F14.2010.000</b>	5	0.081 kg
4 positions with latch position, lockable	Metal silver	Metal	C	<b>45-2F27.2010.000</b>	6	0.081 kg
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position	Plastic black	Plastic	B	<b>45-2F0T.1010.000</b>	1	0.035 kg
2 positions (LR) with latch position	Plastic black	Plastic	C	<b>45-2F20.1010.000</b>	2	0.035 kg
2 positions (U-D) without latch position	Plastic black	Plastic	B	<b>45-2F38.1010.000</b>	3	0.035 kg
2 positions (UD) with latch position	Plastic black	Plastic	C	<b>45-2F41.1010.000</b>	4	0.035 kg
4 positions without latch position	Plastic black	Plastic	B	<b>45-2F0V.1010.000</b>	5	0.035 kg
4 positions with latch position	Plastic black	Plastic	C	<b>45-2F21.1010.000</b>	6	0.035 kg
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position	Metal sandgrey	Plastic	B	<b>45-2F0T.3010.000</b>	1	0.042 kg
2 positions (LR) with latch position	Metal sandgrey	Plastic	C	<b>45-2F20.3010.000</b>	2	0.042 kg
2 positions (U-D) without latch position	Metal sandgrey	Plastic	B	<b>45-2F38.3010.000</b>	3	0.042 kg
2 positions (UD) with latch position	Metal sandgrey	Plastic	C	<b>45-2F41.3010.000</b>	4	0.042 kg
4 positions without latch position	Metal sandgrey	Plastic	B	<b>45-2F0V.3010.000</b>	5	0.042 kg
4 positions with latch position	Metal sandgrey	Plastic	C	<b>45-2F21.3010.000</b>	6	0.042 kg
 <p><b>Toggle stick, Front dimension Ø 29.45 mm</b></p>						
2 positions (L-R) without latch position	Metal silver	Metal	B	<b>45-2F0T.2010.000</b>	1	0.081 kg
2 positions (LR) with latch position	Metal silver	Metal	C	<b>45-2F20.2010.000</b>	2	0.081 kg
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2 positions (UD) with latch position	Metal silver	Metal	C	<b>45-2F41.2010.000</b>	4	0.081 kg
4 positions without latch position	Metal silver	Metal	B	<b>45-2F0V.2010.000</b>	5	0.081 kg
4 positions with latch position	Metal silver	Metal	C	<b>45-2F21.2010.000</b>	6	0.081 kg

Switching action: B = Momentary, C = Maintain

# 45 Raised design



# 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 experts. 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.

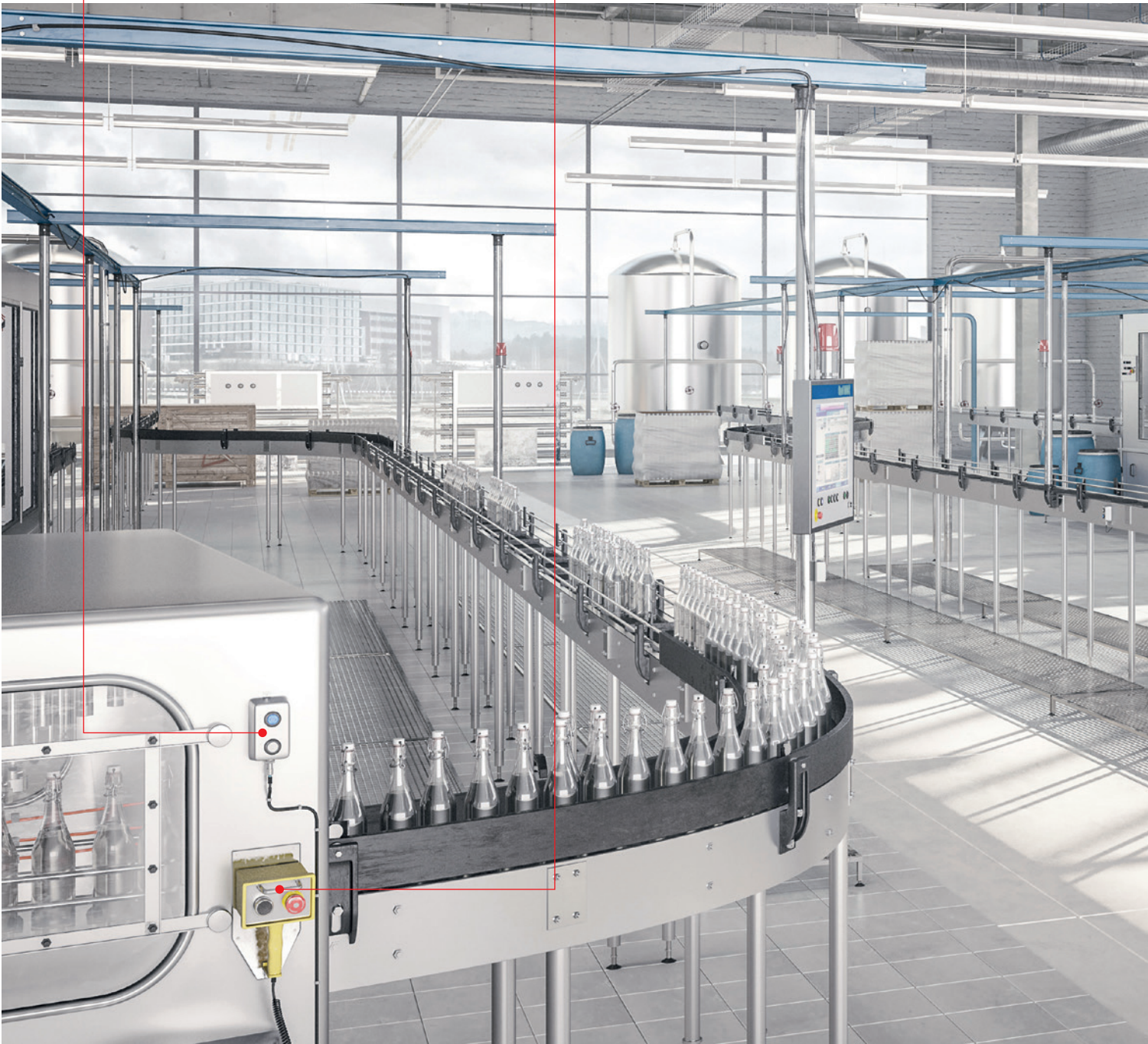
# Control. *For every application.*

## 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)