

**Series 51, flush-mounting**



EAO, the expert for Human Machine Interfaces, adds a new 2 mm high, flush-mounting pushbutton to the Series 51 switch range. This versatile family of switches and indicators offers a low behind-panel depth of just 31 mm for indicators and 35 mm for switches. With the compact mono-block design, they mount faster and easier, and provide more room for additional system components. The range comprises expertly-designed illuminated pushbuttons, indicators, selector switches and keylock switches in a choice of sizes, shapes and materials – hard-wearing plastic and aluminium.

**Main features**

- Low behind-panel depth: Indicator  $\geq$  31 mm
- Low behind-panel depth: Switch  $\geq$  35 mm
- Height from panel when mounted: 2 mm
- Wide range of switching elements
- Attractive design
- Sealed to IP65 (at front)
- Actuators and lenses available in different colours and materials

**Mounting**

Mounting holes 21 x 21 mm, 21 x 27 mm, 22.5 mm dia.

**Typical applications**

Thanks to the small mounting depth and the wide choice of front designs, the Series 51 can be used in virtually any application.

**Switching systems**

*Switching element SE 16 with soldering terminals*  
 Self-cleaning, double-break, snap action switching system. 1NC and 1NO contact per switching element. Available with up to 4 switching elements (4NC + 4NO).

*Switching element SE2.8 with soldering/plug-in terminal*  
 Self-cleaning, double-break, snap action switching system.  
 1 normally closed and 1 normally open contact.

*Switching element for keylock/selector switch, 3 positions*  
 Self-cleaning, double-break, snap action switching system.  
 2 normally closed and 2 normally open contact.

*Switching element LL with universal terminal*  
 Single-break low level system. Two momentary contacts per switching element. Combination of NO and NC is possible.

**Materials**

*Actuator housing*  
 Polyetherimide (PEI)

*Lens*  
 Polymethylmethacrylat (PMMA) or anodised aluminium

*Switching element*

With soldering terminals:	PA 6.6 polyamid (PA 6.6)
With soldering/plug-in terminals:	diallyphtalat (DAP), polyamid (PA), polysulfon (PSU)
For keylock/selector switch:	diallyphtalat
With universal terminal:	polysulfon

*Contact material*

With soldering terminals:	silver gold-plated
With soldering/plug-in terminals:	silver gold-plated
For keylock/selector switch, 3 positions:	gold-plated hard silver
With universal terminal:	gold-plated

**Mechanical characteristics**

*Terminals*

Soldering terminal  
Soldering/plug-in terminals 2.8x0.5 mm  
Universal terminal with integrated plug-in terminal 2.0x0.5 mm,  
soldering terminal and printed circuit board terminal

*Actuating force*

Pushbutton: 4 ... 6 N (depending on number of switching elements)  
Keylock/selector switch: 2.5 ... 5.5 Ncm (depending on number of switching elements)

*Mechanical lifetime*

Pushbutton "Maintained action": 1 M cycles of operation  
Pushbutton "Momentary action": 1 M cycles of operation  
Keylock switch: 50 000 cycles of operation  
Selector switch: 100 000 cycles of operation

**Electrical characteristics, switching elements**

Soldering terminal: 5 VAC/DC, 1 mA ... 250 VAC/DC 5 A  
Soldering/plug-in terminal: 5 VAC/DC, 1 mA ... 250 VAC/DC, 5 A  
Keylock/selector switch, 3 positions: 5 VAC/DC, 1 mA ... 250 VAC/DC 5 A  
Universal terminal: 100 µV/10 µA ... 42 VAC/DC, 100 mA

*Illumination*

T1 3/4 Midget Groove Filament lamp "white"  
T1 3/4 Midget Groove single LED red, yellow, green, blue and white

**Environmental conditions**

Storage temperature: -40 °C ... +85 °C  
Operating temperature: -25 °C ... +55 °C  
Protection degree: IP65  
Approvals: UL, CSA, ENEC (EN 61058), CB (IEC 61058), Germanischer Lloyd  
Declaration of conformity: CE

**Versions**

Low behind-panel depth: Indicator ≥ 31 mm  
Low behind-panel depth: Switch ≥ 35 mm

Devices	24x24 mm	24x30 mm	25 mm	Terminals
Indicator	●	●	●	A/C/D
Illuminated pushbutton	●	●	●	B/C/D
Keylock switch 2 positions	●	●	●	B/C/D
Keylock switch 3 positions	●	●	●	E
Selector switch 2 positions	●	●	●	B/C/D
Selector switch 3 positions	●	●	●	E

**Terminals**

