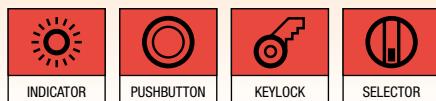


# Series 71

22.5 mm 21 x 21 mm 21 x 27 mm IP65 3A 250VAC



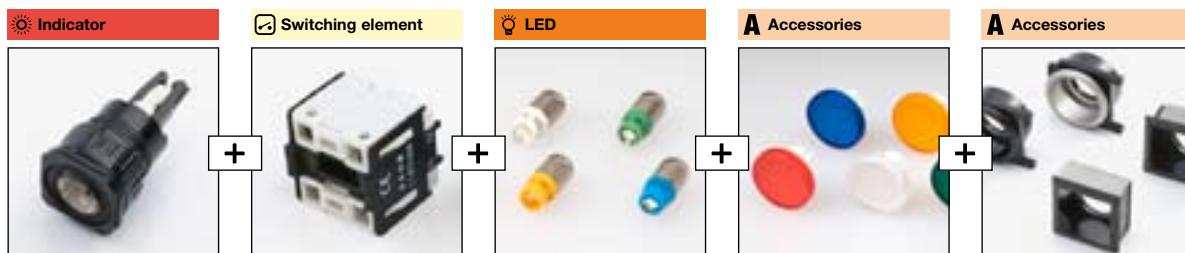
Choose one component from each of the coloured sections to assemble a complete switch.  
For other options or further information please contact your local sales office.

## Product Profile

The Series 71 is a high quality, modular switch range that includes pushbuttons, indicators, selector switches and keylock switches in flush mount with self cleaning snap-action switching elements. The switching elements may be soldered directly onto the PCB and the actuators are lockable with an interlocking pin, no spacing pins needed.

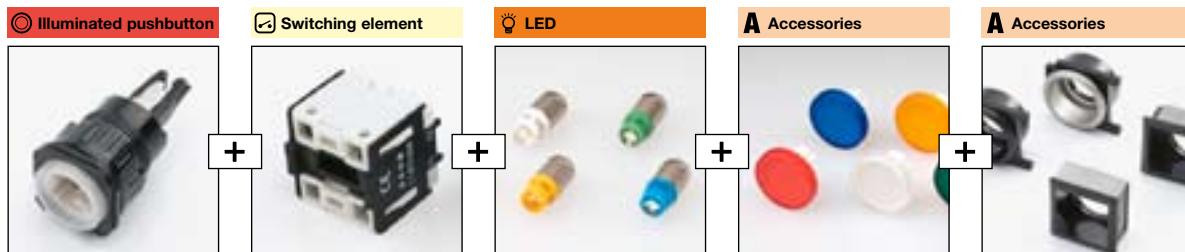
Technical data see page 114

- IP65 Protection
- Switch Rating, 3A, 250VAC
- Flush Mounting into 22.5 mm, 21 x 21 mm and 21 x 27 mm cut out
- Illumination using midget-grooved T13/4 lamps or single chip LED's
- All standard lenses are transparent with translucent diffuser available in different colours
- For keylock switches 135 different keys are available

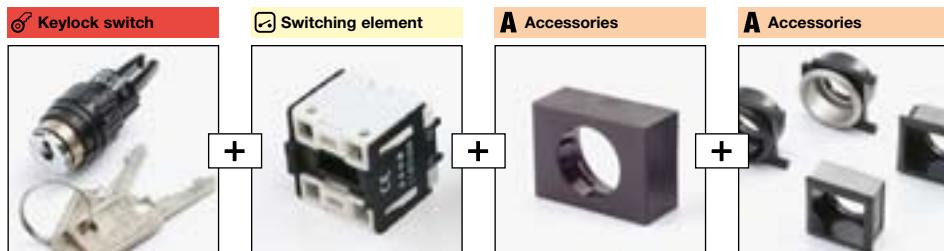


For a complete indicator you will need to order the appropriate contact block, LED, lens and bezel

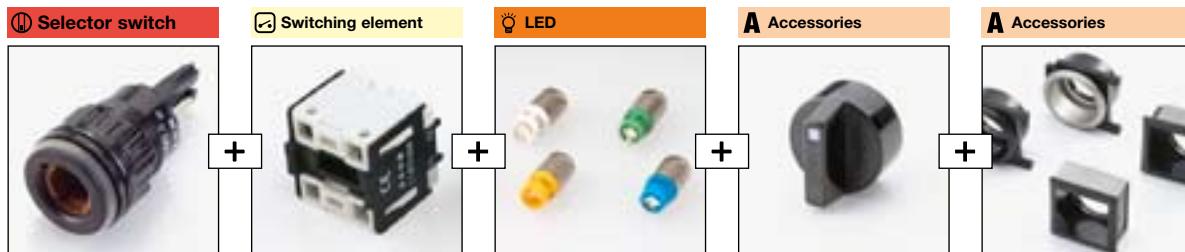
**Ordering Guide**  
Choice of front bezel determines front shape



For a complete illuminated pushbutton you will need to order the appropriate contact block, LED, lens and bezel



For a complete keylock switch you will need to order the appropriate contact block and bezel

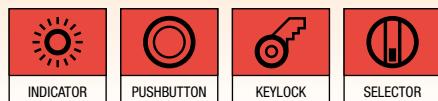


For a complete selector switch you will need to order the appropriate contact block, LED, lever and bezel



# Series 71

22.5 mm 21x21 mm 21x27 mm IP65 3A 250VAC



Choose one component from each of the coloured sections to assemble a complete switch.  
For other options or further information please contact your local sales office.

## LED

## A Accessories



LED, T1 1/4 MG, 12 Volt and 28 Volt.  
(Also available in 6 Volt, 24 Volt and 48 Volt)

Lens, plastic for flush mount rectangular indicator and pushbutton actuators

Lens, plastic for flush mount round indicator and pushbutton actuators

Colour	Part No.	Voltage	Colour	Part No.	Size	Colour	Part No.	Size
● Red	10-2J09.1062	12VAC/DC, 7/14mA	● Red	61-9681.2	24x30 mm	● Red	61-9642.2	25 mm Ø
■ Yellow	10-2J09.1064	12VAC/DC, 7/14mA	■ Yellow	61-9681.4	24x30 mm	■ Yellow	61-9642.4	25 mm Ø
■ Green	10-2J09.1065	12VAC/DC, 7/14mA	■ Green	61-9681.5	24x30 mm	■ Green	61-9642.5	25 mm Ø
■ Blue	10-2J09.1066	12VAC/DC, 7/14mA	■ Blue	61-9681.6	24x30 mm	■ Blue	61-9642.6	25 mm Ø
○ White	10-2J09.1069	12VAC/DC, 7/14mA	○ Clear	61-9681.7	24x30 mm	○ Clear	61-9642.7	25 mm Ø
● Red	10-2J13.1062	28VAC/DC, 7/14mA						
■ Yellow	10-2J13.1064	28VAC/DC, 7/14mA						
■ Green	10-2J13.1065	28VAC/DC, 7/14mA						
■ Blue	10-2J13.1066	28VAC/DC, 7/14mA						
○ White	10-2J13.1069	28VAC/DC, 7/14mA						

## A Accessories



Lens, plastic for flush mount square indicator and pushbutton actuators

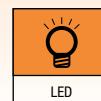
Lever for selector switch, flush mount, coloured lever bar options available as indicated

Keylock switch front bezel, black plastic

Colour	Part No.	Size	Colour	Part No.	Image	Part No.	Size
● Red	61-9671.2	24x24 mm	● Red	61-9028.20	1	61-9230.0	24x30 mm
■ Yellow	61-9671.4	24x24 mm	■ Yellow	61-9028.40	2	61-9220.0	24x24 mm
■ Green	61-9671.5	24x24 mm	■ Green	61-9028.50	3	61-9210.0	25 mm Ø
■ Blue	61-9671.6	24x24 mm	■ Blue	61-9028.60			
○ Clear	61-9671.7	24x24 mm	○ White	61-9028.9			
			● Black	61-9028.0			

**Choose one component from each of the coloured sections to assemble a complete switch.**

For other options or further information please contact your local sales office.



## A Accessories



Front bezel set for flush mount indicator, illuminated pushbutton and square and rectangular keylock switch



Front bezel set for round flush mount selector, keylock switch and square selector switch



Flap guard, flush mount

## A Accessories



## Blanking plate



Lens remover for flush mount, mounting tool  
and LED remover

**System switch 71****Switching system**

Self-cleaning, double-break snap-action switching system with one NC- (Normally closed) and one NO-contact (Normally open).

**Material****Lens**

Polycarbonat (PC), as per UL 94 V0, or Aluminium anodized

**Front bezel**

Polyetherimid (PEI), as per UL 94 V0, or Aluminium anodized

**Material of contact**

AgNi, 2 µm gold plated

**Switching element**

Polyethylene terephthalate (PETP), as per UL 94 V0

**Actuator housing**

Polyetherimide (PEI), as per UL 94 V0

**Mechanical characteristics****Terminals**

PCB terminal, Brass gold plated

**Actuating torque**

Selector-/Keylock switch 4 Ncm ... 8 Ncm

**Actuating force**

Pushbutton 2 N ... 3 N

**Actuating travel**

Pushbutton 3 mm

Selector-/keylock switch 2 positions

3 positions

Momentary action approx. 42°

approx. 2 x 42°

Maintained action approx. 90°

approx. 2 x 90°

**Rebound time**

≤ 1 ms

**Mechanical lifetime**

Pushbutton maintained action	1 million	cycles of operation
Pushbutton momentary action	2 million	cycles of operation
Keylock switch	50 000	cycles of operation
Selector switch	100 000	cycles of operation

**Resistance to heat of soldering**

Manual soldering	350 °C, 3 sec.
Flow soldering	260 °C, 5 sec.

**Electrical characteristics****Contact resistance**

Starting value (initial) ≤ 50 mΩ

**Isolation resistance**

≥ 10<sup>12</sup> Ω

**Switch rating**

Switch rating AC cosφ 0.7 ... 0.8

Voltage 250 VAC

Current 3 A

**Switch rating DC**

Voltage 24 VDC 250 VDC

Current 3 A 0.5

**Recommended minimum operational data**

Voltage 5 VAC

Current 10 mA

**Electric strength**

2000 VAC, 50 Hz, 1 min. between all terminals and earth

**Environmental conditions****Storage temperature**

-40 °C ... +85 °C

**Operating temperature**

-25 °C ... +55 °C

**Protection degree**

Frontside IP65

**Shock resistance**

(semi-sinusoidal)

max. 500 m/s<sup>2</sup>, pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27

**Vibration resistance**

(sinusoidal)

max. 100 m/s<sup>2</sup> at 10 Hz ... 500 Hz, as per EN IEC 60068-2-6

**Climate resistance**

Damp heat, state

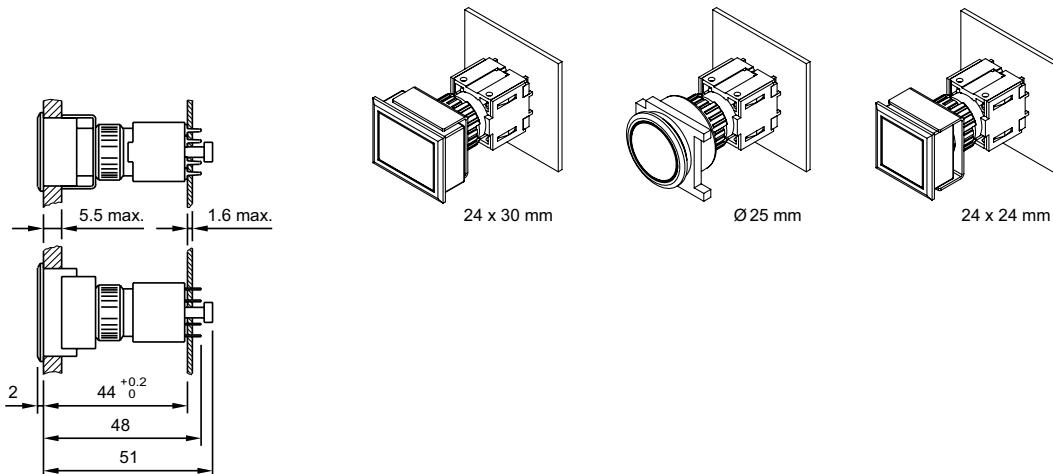
56 days, +40 °C / 93% relative humidity, as per EN IEC 60068-2-78

**Approvals****Declaration of conformity**

CE

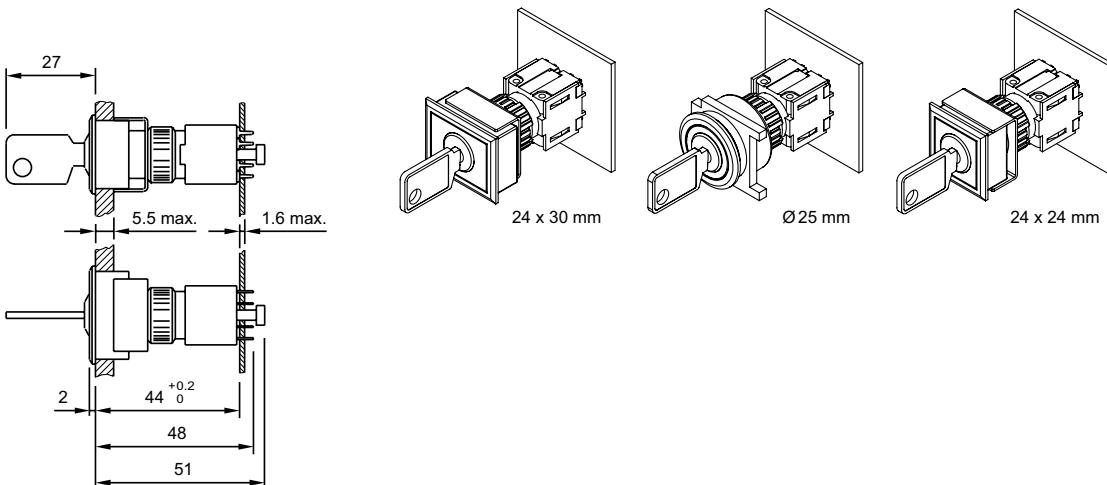
## 71 Indicator Illuminated, Pushbutton

Flush, Round, Square, Rectangular



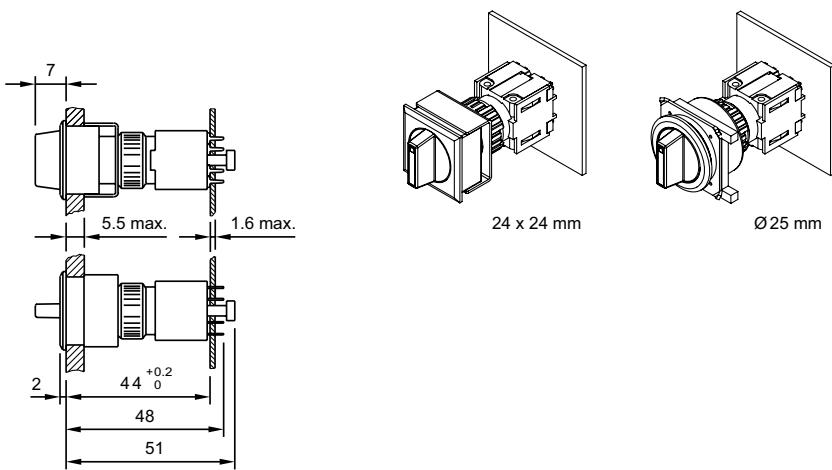
## 71 Keylock switch

Flush, Round, Square, Rectangular



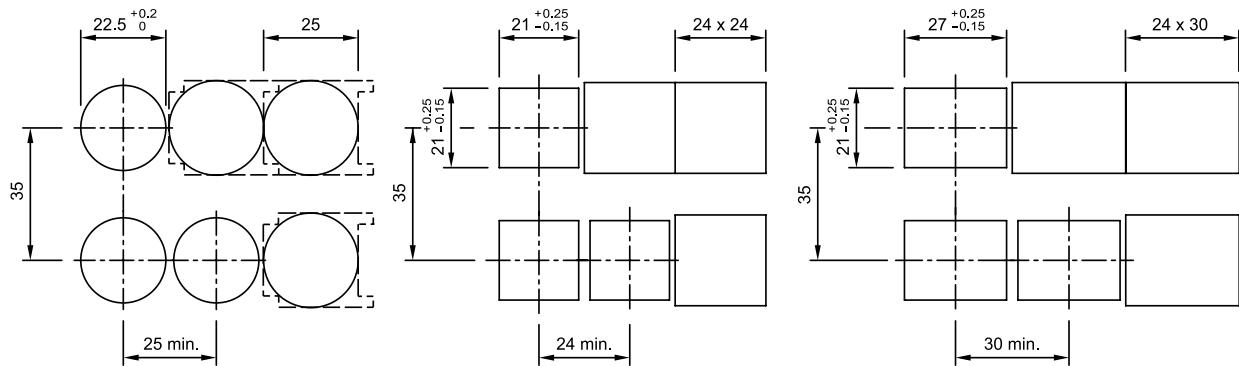
## 71 Selector switch

Flush, Round, Square, Rectangular



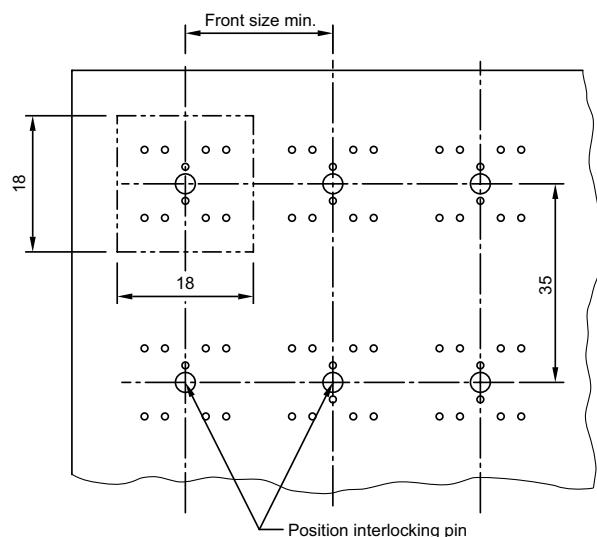
71 Cut-outs

Indicator, Pushbutton Flush, Keylock Flush, Selector Flush

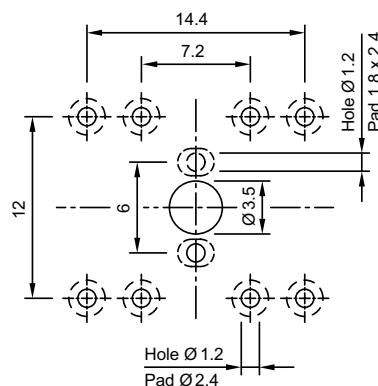


## 71 PCB Layout

Indicator, Pushbutton Flush, Keylock Flush, Selector Flush



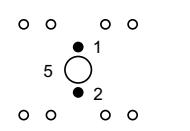
Drilling plan (Elementside)  
Through-connection recommended



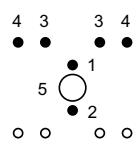
Note:

Note:  
Pitch of the print circuit board hole Ø 3.5 must agree with the mounting holes on the front plate

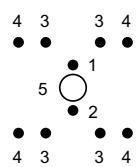
## Layout



Illumination element  
71-670.006



Switching element  
71-671.026



Switching element  
71-672.006

- 1 Lamp cathode (-)
  - 2 Lamp anode (+)
  - 3 Contact normally closed
  - 4 Contact normally open
  - 5 Hole for interlocking pin