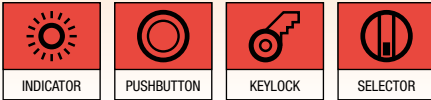


Series 71

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.

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

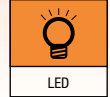
- IP65 Protection
- Switch Rating, 3A, 250VAC
- Flush Mounting into 22.5 mm, 21 x21 mm and 21 x27 mm cut out
- Illumination using midget-grooved T13/4 lamps or single chip LED's
- All standard lenses are transparent with translucent diffuser available in different colours
- For keylock switches 135 different keys are available

Indicator	Switching element	LED	Accessories	Accessories
For a complete indicator you will need to order the appropriate contact block, LED, lens and bezel				
Illuminated pushbutton	Switching element	LED	Accessories	Accessories
For a complete illuminated pushbutton you will need to order the appropriate contact block, LED, lens and bezel				
Keylock switch	Switching element	Accessories	Accessories	
For a complete keylock switch you will need to order the appropriate contact block and bezel				
Selector switch	Switching element	LED	Accessories	Accessories
For a complete selector switch you will need to order the appropriate contact block, LED, lever and bezel				

Ordering Guide

Choice of front bezel determines front shape

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.



Indicator



Indicator body for flush mount, black plastic

Part No.
71-600.0

For complete switch also order **A**

Illuminated pushbutton



Illuminated flush mount pushbutton actuator, round, black plastic

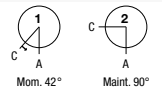
Part No.	Function
71-611.0	Momentary
71-612.0	Maintained

For complete switch also order **A**

Keylock switch



Keylock switch actuator, 2 position for flush mount



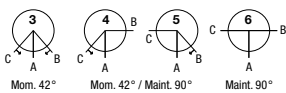
Graphic	Part No.	Function	Key rem.
1	71-621.0/D	Momentary	A
2	71-622.0/D	Maintained	A
2	71-623.0/D	Maintained	C
2	71-624.0/D	Maintained	A + C

For complete switch also order **A**

Keylock switch



Keylock switch actuator, 3 position for flush mount



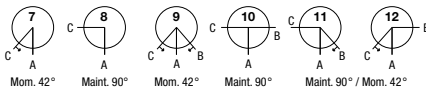
Graphic	Part No.	Function	Key rem.
3	71-631.0/D	Momentary/Momentary	A
4	71-638.0/D	Momentary/Maintained	A
4	71-639.0/D	Momentary/Maintained	A + B
5	71-636.0/D	Maintained/Momentary	A
5	71-637.0/D	Maintained/Momentary	A/C
6	71-632.0/D	Maintained/Maintained	A
6	71-635.0/D	Maintained/Maintained	A + B + C
6	71-634.0/D	Maintained/Maintained	B + C
6	71-633.0/D	Maintained/Maintained	C

For complete switch also order **A**

Selector switch



Selector switch actuator, 2 and 3 position for flush mount



Graphic	Part No.	Function	Positions
7	71-641.0	Momentary	2
8	71-642.0	Maintained	2
9	71-651.0	Momentary/Momentary	3
12	71-658.0	Momentary/Maintained	3
11	71-656.0	Maintained/Momentary	3
10	71-652.0	Maintained/Maintained	3

For complete switch also order **A**

Contact block

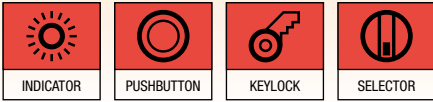


Indicator Element and Switching Element. Interlocking pin for PCB assembly supplied with each element

Image	Part No.	Contact type	Product description
1	71-670.006		Indicator element
2	71-671.026	1NO/1NC	Switching element
3	71-672.026	2NO/2NC	Switching element

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



LED, T1¼ MG, 12 Volt and 28 Volt.
(Also available in 6 Volt, 24 Volt and 48 Volt)

Colour	Part No.	Voltage
● Red	10-2J09.1062	12VAC/DC, 7/14mA
● Yellow	10-2J09.1064	12VAC/DC, 7/14mA
● Green	10-2J09.1065	12VAC/DC, 7/14mA
● Blue	10-2J09.1066	12VAC/DC, 7/14mA
○ White	10-2J09.1069	12VAC/DC, 7/14mA
● 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 rectangular indicator and pushbutton actuators

Colour	Part No.	Size
● Red	61-9681.2	24 x 30 mm
● Yellow	61-9681.4	24 x 30 mm
● Green	61-9681.5	24 x 30 mm
● Blue	61-9681.6	24 x 30 mm
○ Clear	61-9681.7	24 x 30 mm



Lens, plastic for flush mount round indicator and pushbutton actuators

Colour	Part No.	Size
● Red	61-9642.2	25 mm Ø
● Yellow	61-9642.4	25 mm Ø
● Green	61-9642.5	25 mm Ø
● Blue	61-9642.6	25 mm Ø
○ Clear	61-9642.7	25 mm Ø

A Accessories



Lens, plastic for flush mount square indicator and pushbutton actuators

Colour	Part No.	Size
● Red	61-9671.2	24 x 24 mm
● Yellow	61-9671.4	24 x 24 mm
● Green	61-9671.5	24 x 24 mm
● Blue	61-9671.6	24 x 24 mm
○ Clear	61-9671.7	24 x 24 mm



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

Colour	Part No.
● Red	61-9028.20
● Yellow	61-9028.40
● Green	61-9028.50
● Blue	61-9028.60
○ White	61-9028.9
● Black	61-9028.0



Keylock switch front bezel, black plastic

Image	Part No.	Size
1	61-9230.0	24 x 30 mm
2	61-9220.0	24 x 24 mm
3	61-9210.0	25 mm Ø

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

Image	Part No.	Material	Size
1	61-9933.10	Plastic black	25 mm Ø
2	61-9933.0	Aluminium nat.	25 mm Ø
3	61-9931.0	Plastic black	24x30 mm
4	61-9930.0	Plastic black	24x24 mm



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

Image	Part No.	Material	Size
1	61-9932.10	Plastic black	25 mm Ø
2	61-9936.0	Plastic black	24x24 mm
3	61-9932.0	Aluminium nat.	25 mm Ø



Flap guard, flush mount

Image	Part No.	for switch
1	61-9922.0	24x30 mm
2	61-9921.0	24x24 mm
3	61-9924.0	25 mm Ø

A Accessories



Blanking plate

Image	Part No.	Mounting hole
1	61-9453.0	22.5 mm Ø
2	61-9452.0	21x27 mm
3	61-9451.0	21x21 mm



Lens remover for flush mount, mounting tool and LED remover

Image	Part No.	Product description
1	61-9730.0	Lens remover for flush mount
2	01-907	Mounting tool
3	61-9740.0	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

≥10¹² 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/s², pulse width 11 ms, 3-axis, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100 m/s² 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

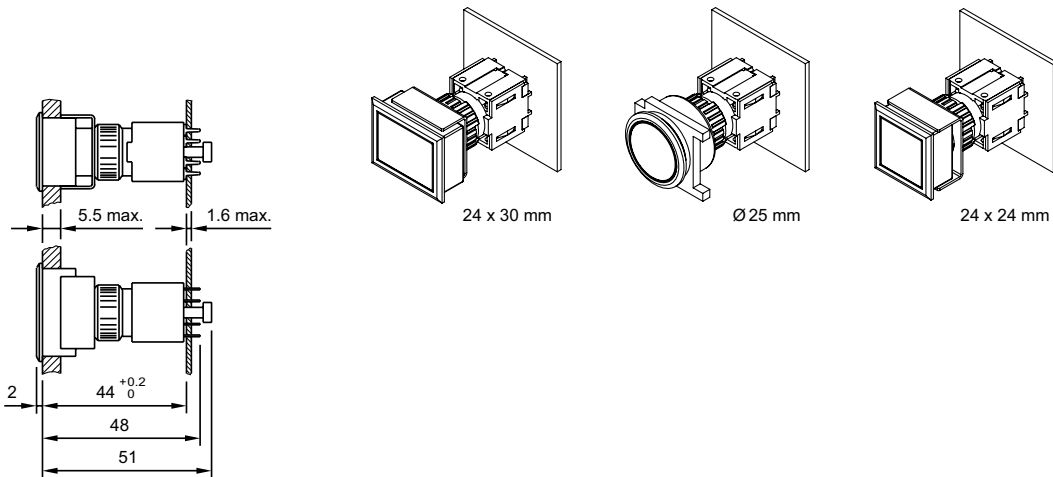
Approvals

Declaration of conformity

CE

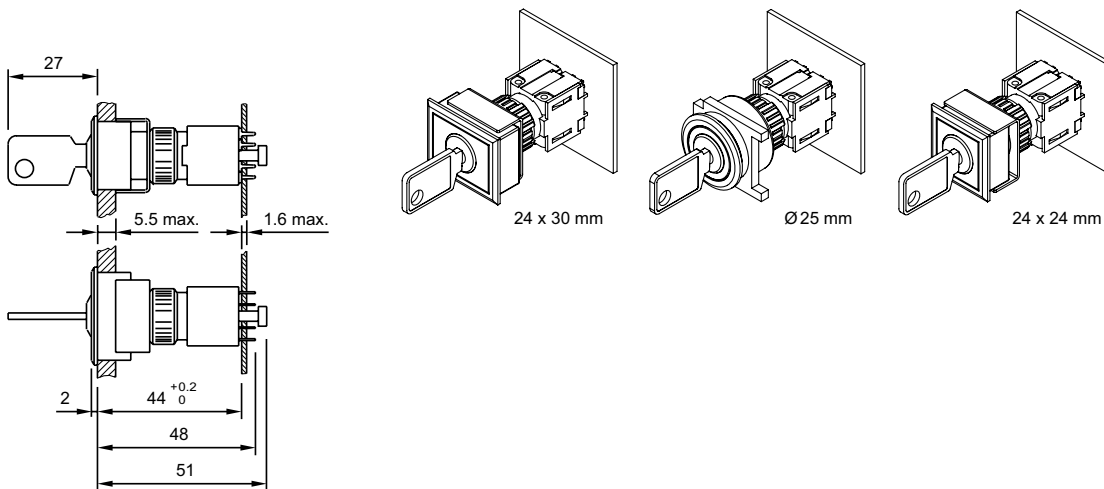
71 Indicator Illuminated, Pushbutton

Flush, Round, Square, Rectangular



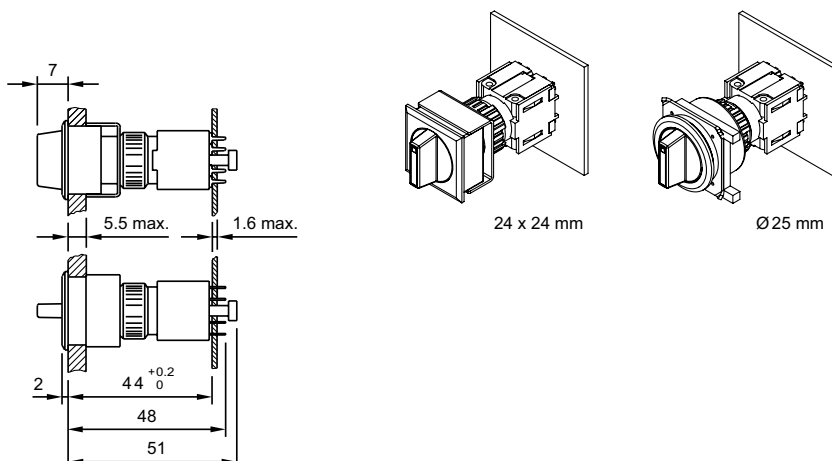
71 Keylock switch

Flush, Round, Square, Rectangular



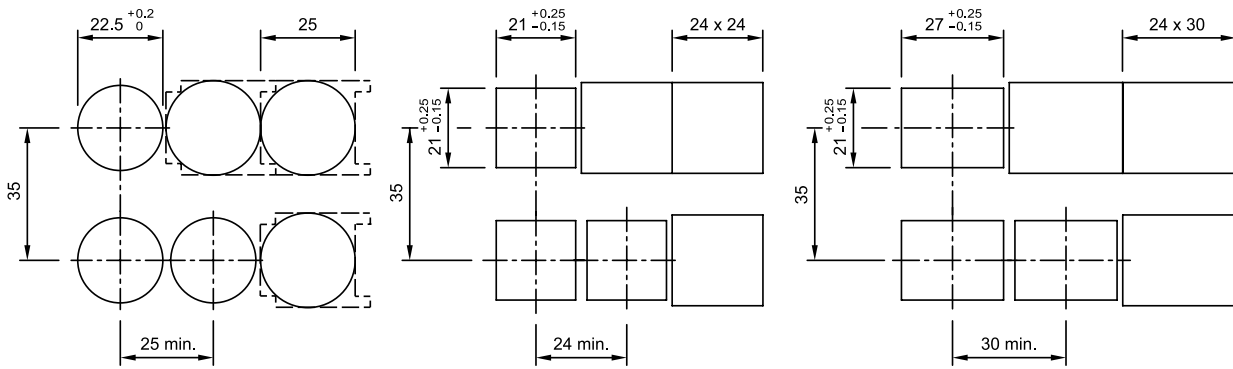
71 Selector switch

Flush, Round, Square, Rectangular



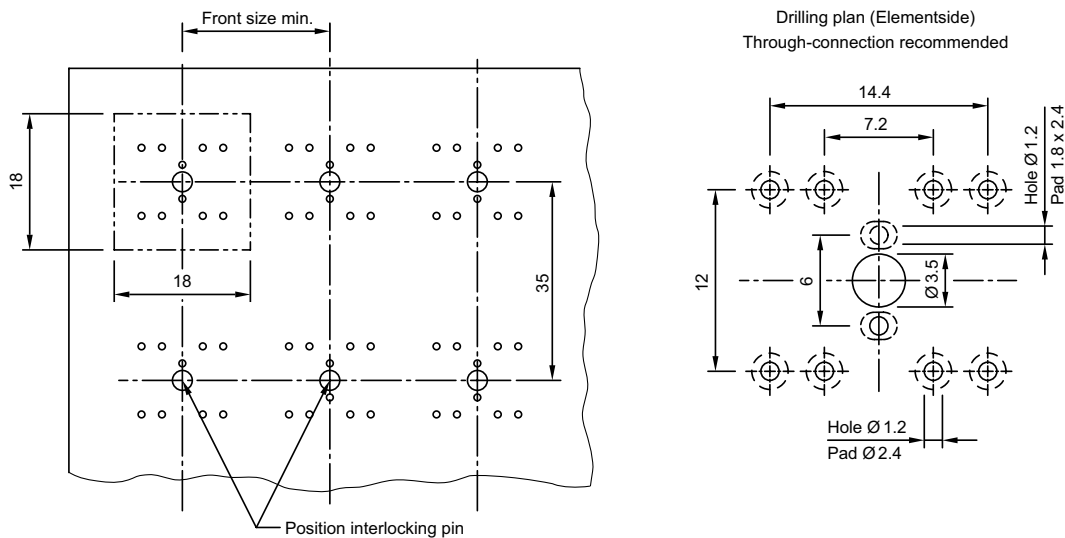
71 Cut-outs

Indicator, Pushbutton Flush, Keylock Flush, Selector Flush



71 PCB Layout

Indicator, Pushbutton Flush, Keylock Flush, Selector Flush



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

Layout

