



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 14 is a high quality switch range that includes pushbuttons, indicators, mushroom headed switches, selector switches and 2 position key switches.

Options include self cleaning, snap-action or low level switching elements.

Technical data see pages 53-54
Technical drawings see pages 55-56

- IP67 Protection
- Switch Rating:
Maximum Voltage, 250VAC
Maximum Thermal Current, $I_{th} = 5A$
24VDC/2A, 250VAC/2A
- Raised Mounting into 22.5mm cut out
- Flush Mounting into 30.5mm cut out
- Illumination using T5.5 Lamps or LED's
- All standard lenses are transparent with translucent diffuser
- Solder, plug-in or PCB connections

Indicator



Indicator body round for raised full face, black plastic, 22.5mm mounting

Part No.
14-030.005



Indicator body for raised and flush mount, black plastic

Part No.
14-040.005

For flush mount order bezel 704.955.1

For complete switch also order **A**

For complete switch also order **A**

Illuminated pushbutton



Illuminated pushbutton actuator for raised and flush mount, black plastic, solder terminal, snap-action

Part No.	Momentary/Maintained	Contact type
14-131.0252	Momentary	1NO/1NC
14-132.0252	Momentary	2NO/2NC
14-271.0252	Maintained	1NO/1NC
14-272.0252	Maintained	2NO/2NC

For flush mount order bezel 704.955.1

For complete switch also order **A**

Keylock switch



Illuminated pushbutton actuator for raised and flush mount, black plastic, plug-in terminal, snap-action

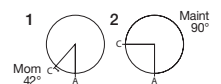
Part No.	Momentary/Maintained	Contact type
14-131.022	Momentary	1NO/1NC
14-271.022	Maintained	1NO/1NC

For flush mount order bezel 704.955.1

For complete switch also order **A**



Keylock switch, 2 position, raised

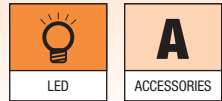


Drawing	Part No.	Momentary/Maintained	Key rem.
1	14-141.025K2	Momentary	A
2	14-235.025K2	Maintained	A

For flush mount order bezel 704.955.1

For complete switch also order **A**

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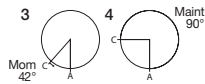


Selector switch

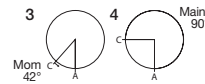
Buzzer



Selector switch short lever 2 position, raised, snap-action



Selector switch long lever 2 position, raised, snap-action



Buzzer, plastic bezel, raised, 22.5mm mounting, 24VDC, IP65, 95dB ± 8 at a distance of 0.1m

Drawing	Part No.	Momentary/Maintained	Contact type
3	14-501.0252	Momentary	1NC/1NO
4	14-506.0252	Maintained	1NC/1NO

Drawing	Part No.	Momentary/Maintained	Contact type
3	14-551.0252	Momentary	1NO/1NC
4	14-556.0252	Maintained	1NO/1NC

Part No.	Product description
14-810.002	Black plastic
14-810.902	Chromium-plate

For flush mount order bezel 704.955.1

For complete switch also order **A**

For complete switch also order **A**

Buzzer

LED



Buzzer, plastic bezel, flush mount, 30.5mm mounting, 24VDC, IP40, 95dB ± 8 at a distance of 0.1m



LED, T5.5, single chip, 6 Volt and 12 Volt



LED, T5.5, single chip, 24 Volt and 28 Volt

Part No.	Front finish
14-810.910	Black plastic
14-810.918	Chromium-plated

Colour	Part No.	Voltage
Red	10-2106.3142	6VDC/15mA
Yellow	10-2106.3144	6VDC/15mA
Green	10-2106.3145	6VDC/7mA
Blue	10-2106.3146	6VDC/15mA
White	10-2106.3149	6VDC/15mA
Red	10-2109.1062	12VAC/DC, 7/14mA
Yellow	10-2109.1064	12VAC/DC, 7/14mA
Green	10-2109.1065	12VAC/DC, 7/14mA
Blue	10-2109.1066	12VAC/DC, 4/7mA
White	10-2109.1069	12VAC/DC, 7/14mA

Colour	Part No.	Voltage
Red	10-2112.1062	24VAC/DC, 7/14mA
Yellow	10-2112.1064	24VAC/DC, 7/14mA
Green	10-2112.1065	24VAC/DC, 4/7mA
Blue	10-2112.1066	24VAC/DC, 7/14mA
White	10-2112.1069	24VAC/DC, 7/14mA
Red	10-2113.1062	28VAC/DC, 7/14mA
Yellow	10-2113.1064	28VAC/DC, 7/14mA
Green	10-2113.1065	28VAC/DC, 4/7mA
Blue	10-2113.1066	28VAC/DC, 7/14mA
White	10-2113.1069	28VAC/DC, 7/14mA



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LED



LED, T5.5, single chip, 48 Volt

Colour	Part No.	Voltage
Red	10-2119.1042	48VAC/DC, 4/8mA
Yellow	10-2119.1044	48VAC/DC, 4/8mA
Green	10-2119.1045	48VAC/DC, 4/8mA
Blue	10-2119.1046	48VAC/DC, 4/8mA
White	10-2119.1049	48VAC/DC, 4/8mA

A Accessories



Lens, plastic for raised, round indicator body, full face

Colour	Part No.
Red	704.603.2
Yellow	704.603.4
Green	704.603.5
Blue	704.603.6
Clear	704.603.7

For complete lens also order diffuser 704.608.9



Lens cap, round, transparent, plastic for raised and flush indicators with bezel and pushbutton actuators

Colour	Part No.
Red	704.602.2
Yellow	704.602.4
Green	704.602.5
Blue	704.602.6
Clear	704.602.7
Black	704.602.0

For complete lens also order diffuser 704.609.9

A Accessories



Lens cap raised, round, transparent, plastic for raised and flush mount pushbutton actuators

Colour	Part No.
Red	704.611.2
Yellow	704.611.4
Green	704.611.5
Blue	704.611.6
Clear	704.611.7

For complete lens also order diffuser 704.610.9 (see page 48)



Lens cap, round, aluminium anodised for raised and flush mount pushbutton actuators

Colour	Part No.	Comment
Red	704.601.2	
Yellow	704.601.5	
Blue	704.601.6	
Silver	704.601.8	
Silver	704.601.81	Window for illumination
Black	704.601.0	
Black	704.601.01	Window for illumination

Also available in stainless steel

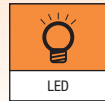
Complete switch



Features

- IP67, sealed from the front
- Intensive LED illumination
- Low mounting depth
- Good low travel, snap action tactile feel
- Easy mounting
- Aluminium lens options for applications requiring vandal resistance
- Raised or flush mount
- Legend options
- Flying lead connector for easy plug and play solution
- Low switch rating options
- World wide approvals

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A Accessories



Aluminium raised bezel, grey plastic raised bezel and flush mount aluminium bezel



Protective cover, raised pushbutton



Aluminium protective cover for flush mount pushbutton with fitted spring, closed

Type	Part No.	Product description	Part No.	Part No.
1	704.600.1	Aluminium raised bezel	704.925.0	● Red 704.928.12
2	704.600.0	Black plastic bezel		● Yellow 704.928.14
2	704.600.6	Grey plastic bezel		● Blue 704.928.16
3	704.955.0	Flush mount aluminium black bezel		○ Natural 704.928.18
3	704.955.1	Flush mount aluminium bezel		
3	704.955.9	Flush mount stainless steel bezel		

A Accessories



Aluminium protective cover for flush mount selector switch short lever with fitted spring, closed



Aluminium protective cover for flush mount selector switch, lockable



Protective front ring with silicon membrane for raised or flush mount pushbutton

Part No.	Part No.	Part No.	Size
○ Natural 704.928.28	○ Natural 704.928.38	704.600.3	29mm diameter for raised pushbutton
		704.955.3	35mm diameter for flush mount pushbutton



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A Accessories



Blanking plate

Part No.	Mounting hole
704.960.7	22.5mm Ø
704.964.8	30.5mm Ø



LED and lens remover

Image	Part No.	Product description
1	61-9740.0	LED remover
2	700.006.0	Lens remover



Diffuser for raised indicator, diffuser for flat lens indicator and pushbutton

Image	Part No.	Product description
1	704.608.9	Diffuser for raised indicator
2	704.609.9	Diffuser for flat lens

A Accessories



Legend plate, adhesive, natural anodized aluminium finish for raised and flush mount pushbuttons

Image	Part No.	Mounting hole
1	704.968.2	22.5mm
2	704.968.3	30.5mm



Label for front bezel set for 22.5 and 30.5mm flush mount with label support, self adhesive

Image	Part No.
1	704.968.0
2	704.968.1



Actuator with snap-action switching element

Switching system

self-cleaning, double-break, snap action switching system (with contact gap 2 x 0.5 mm). 1 normally closed or 1 normally open contact per element. Snap-action switching elements with soldering terminals at the sides: up to 4 switching elements can be on a pushbutton (max. 4 normally closed and 4 normally open contacts). Snap-action switching element with axial plug-in terminals 2.8 mm stackable, only 1 switching element can be on a pushbutton.

Material

Material of contacts

gold-plated silver

Switching element

plug-in/soldering terminal
diallylphthalate DAP, polyamide 66, polysulfone, heat-resistant and self-extinguishing
soldering terminal: PA 6.6 Ultramid

Actuator case

polyamide

Mechanical characteristics

Connection method

snap-action switching element with tinned soldering terminals at the sides:
max. wire diameter: 2 wires à 1.2 mm
max. wire cross-section of stranded cable: 1 x 1 mm

snap-action switching element with axial plug-in terminals, which can also be used as soldering terminals: plug-in terminal: 2.8 x 0.5 mm

soldering terminal:

max. wire diameter: 2 wires of 1 mm

max. wire cross-section of stranded cable: 2 x 0.75 mm or 1 x 1.0 mm

Actuating torque

measured at the key or lever of the keylock- or selector switch: 2.5-5.5 Ncm

Actuating force

3.5-5.5 N, depending on the number of switching elements

Actuating travel

illuminated pushbutton: 3mm

switch actuator with 2 positions:

1 x ca. 42° deflection momentary action

1 x ca. 90° deflection maintained action

switch actuator with 3 positions:

2 x ca. 42° deflection momentary action

2 x ca. 90° deflection maintained action

Resistance to climate

standard condition as per IEC 68-2-3 and 2-30

changing condition as per IEC 68-2-14 and 2-33

Storage temperature

-40°C to + 85°C (as per DIN IEC 68-)

Mechanical life

momentary action 2 million cycles of operation

maintained action 1 million cycles of operation

Rebound time

<= 5ms

Resistance to shock

(single impacts, semi-sinusoidal)

15 g for 11 ms as per IEC 512-4-3, IEC 68-2-27

Degree of protection

front as per IEC 529: IP 67

Resistance to vibration

(sinussoidal)

10 g at 10-2000 Hz, amplitude 1.5 mm as per IEC 68-2-6

Ambient air temperature

-25°C to + 55°C

for indicators and illuminated pushbuttons mounted as a block, make sure the heat can escape freely (as per DIN IEC 68-)

Electrical characteristics

Rated insulation voltage

250 VAC/DC as per VDE 0110, group B

Rated current

5 A

Contact resistance

starting value (initial) <= 50 mΩ

Electrostatic breakdown value

<= 15 KV (keylock switch)

Continuous thermal current I_{th2}

5 A

The maximum current in continuous operation and at ambient temperature not exceeding the quoted maximum values.

Switch rating

250 VAC/5 A (cos φ 1)

250 VAC/3 A (cos φ 0.3)

switch rating AC, cos φ 0.7:

voltage	125 V	250 V
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current	3 A	2 A
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switch rating DC (inductive), L:R = 30 ms:

voltage	24 V	60 V	110 V	220 V
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current	2 A	0.7 A	0.2 A	0.1 A
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Electric strength

2500 VAC, 50 Hz, 1 min. between all terminals and earth, as per IEC 512-2-11.

Rules

EN 61 058

Approvals

- CSA 300 VAC

- UL

- German Lloyd

- German Navy

- CB

- ENEC

- CE (declaration of conformity)

Buzzer system

System

Piezo disc

Material

Alarm buzzer case

polyamide

Front cap

plastic: polyamide

metal: nickel-plated brass sea-water proof

Mechanical characteristics

Connection method

plug-in terminal 2.8 x 0.5 mm

Storage temperature

-25°C to + 50°C

(as per DIN IEC 68-)

Degree of protection

IP 40 as per IEC 529 (flush mounting)

IP 65 (raised fitting) as per IEC 529

Ambient air temperature

-25°C to + 50°C (as per DIN IEC 68-)

Electrical characteristics

Frequency (tone)

ca. 2.8 kHz continuous tone only

Sound pressure

95 db (A) ± 8 at a distance of 0.1 m

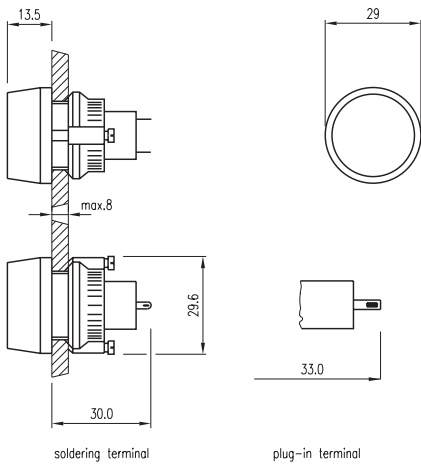
Operation voltage/current

operation voltage: 24 VDC ± 10%

operation current: ≤ 25 mA

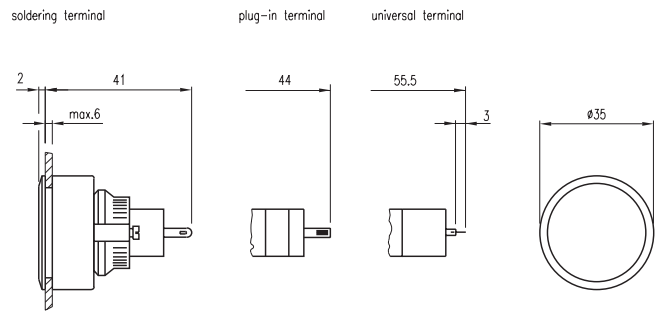
14 Indicator

Raised



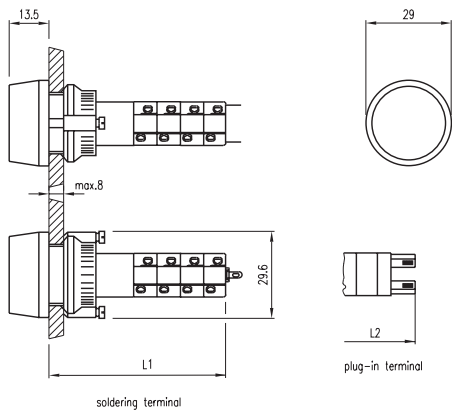
14 Indicator

Flush



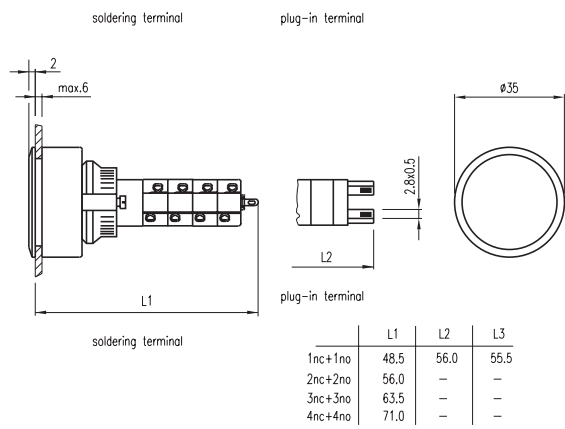
14 Pushbutton

Illuminated, Raised Solder



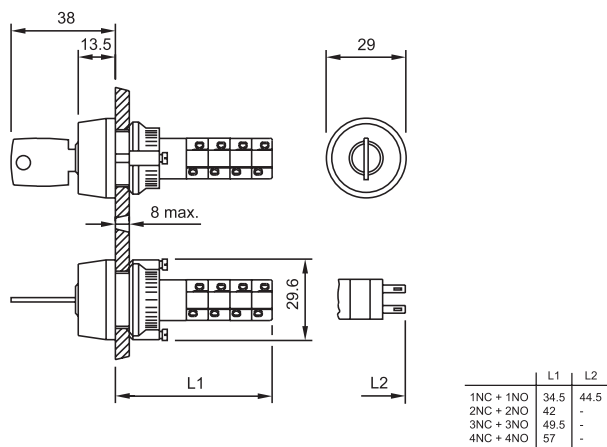
14 Pushbutton

Illuminated, Flush Solder, QC Terminals



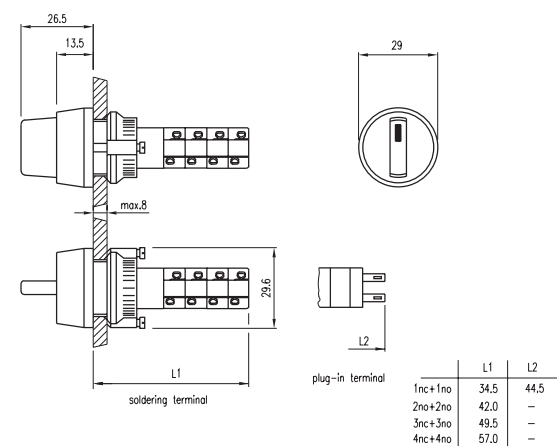
14 Keylock

2-Position



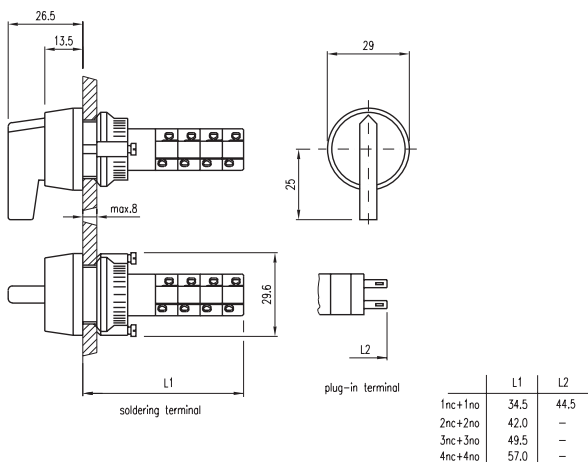
14 Selector, Short Lever

2-Position



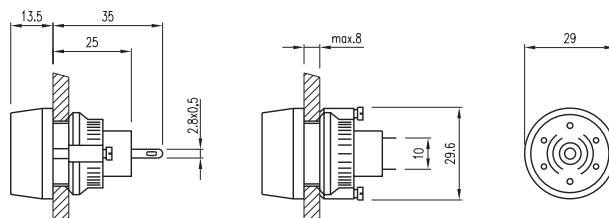
14 Selector, Long Lever

2-Position



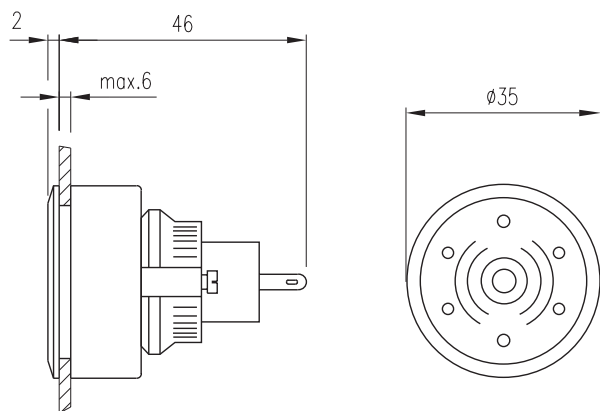
14 Buzzer

Raised



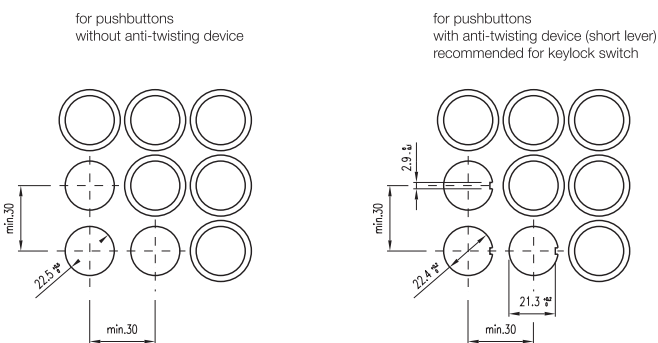
14 Buzzer

Flush



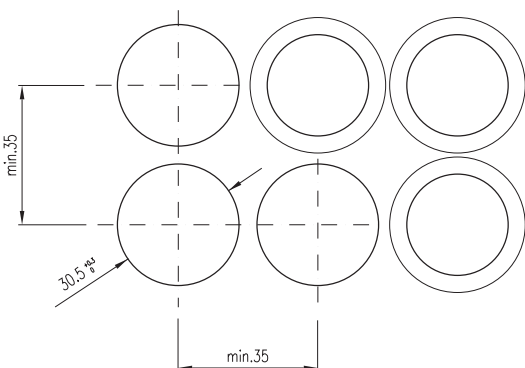
14 Cut-outs

Raised, Pushbuttons, Indicators, Keylocks, Short Lever



14 Cut-outs

Flush, Buzzer, Pushbutton, Indicator



14 Cut-outs

2-Position, Long, Lever Raised

