

Series 14

22.5mm 30.5mm IP67 5A 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 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 page 41

- IP67 Protection
- Switch Rating:
Maximum Voltage, 250VAC
Maximum Thermal Current, I_{th} = 5A
24VDC/2A, 250VAC/2A
- Raised Mounting into 22.5 mm cut out
- Flush Mounting into 30.5 mm 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, 22.5 mm mounting

| Part No. |
|------------|
| 14-030.005 |
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Indicator body for raised and flush mount, black plastic

| Part No. |
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| 14-040.005 |
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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. | Function | 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 |
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For flush mount order bezel 704.955.1

For complete switch also order **A**



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

| Part No. | Function | Contact type |
|------------|------------|--------------|
| 14-131.022 | Momentary | 1NO/1NC |
| 14-271.022 | Maintained | 1NO/1NC |
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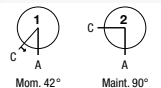
For flush mount order bezel 704.955.1

For complete switch also order **A**

Keylock switch



Keylock switch, 2 position, raised

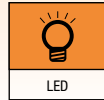


| Graphic | Part No. | Function | Key out. |
|---------|--------------|------------|----------|
| 1 | 14-141.025K2 | Momentary | A |
| 2 | 14-235.025K2 | Maintained | A |
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For flush mount order bezel 704.955.1

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, raised, 22.5 mm mounting, IP65, 24VDC, 95dB ±8 at a distance of 0.1m | | | | | |
| Graphic | Part No. | Function | Contact type | Graphic | Part No. | Function | Contact type | Part No. | Front finish |
| 3 | 14-501.0252 | Momentary | 1NC/1NO | 4 | 14-551.0252 | Momentary | 1NO/1NC | 14-810.002 | Black plastic |
| 4 | 14-506.0252 | Maintained | 1NC/1NO | 5 | 14-556.0252 | Maintained | 1NO/1NC | 14-810.902 | Nickel-plated brass |
| For flush mount order bezel 704.955.1 | | | | | | | | | |

For complete switch also order **A**

For complete switch also order **A**

| Buzzer | | LED | | | | | |
|---|-----------------|--|--------------|---|--------|--------------|------------------|
| | | | | | | | |
| Buzzer, flush mount, 30.5 mm mounting, IP40, 24VDC, 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 | Colour | Part No. | Voltage | Colour | Part No. | Voltage |
| 14-810.910 | Black aluminium | Red | 10-2106.3142 | 6VDC/15mA | Red | 10-2112.1062 | 24VAC/DC, 7/14mA |
| 14-810.918 | Natur aluminium | Yellow | 10-2106.3144 | 6VDC/15mA | Yellow | 10-2112.1064 | 24VAC/DC, 7/14mA |
| | | Green | 10-2106.3145 | 6VDC/15mA | Green | 10-2112.1065 | 24VAC/DC, 7/14mA |
| | | Blue | 10-2106.3146 | 6VDC/15mA | Blue | 10-2112.1066 | 24VAC/DC, 7/14mA |
| | | White | 10-2106.3149 | 6VDC/15mA | White | 10-2112.1069 | 24VAC/DC, 7/14mA |
| | | Red | 10-2109.1062 | 12VAC/DC, 7/14mA | Red | 10-2113.1062 | 28VAC/DC, 7/14mA |
| | | Yellow | 10-2109.1064 | 12VAC/DC, 7/14mA | Yellow | 10-2113.1064 | 28VAC/DC, 7/14mA |
| | | Green | 10-2109.1065 | 12VAC/DC, 7/14mA | Green | 10-2113.1065 | 28VAC/DC, 7/14mA |
| | | Blue | 10-2109.1066 | 12VAC/DC, 7/14mA | Blue | 10-2113.1066 | 28VAC/DC, 7/14mA |
| | | White | 10-2109.1069 | 12VAC/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 |
| For complete lens also order diffuser 704.608.9 (see page 39) | | |

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 (see page 39) | |



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 (see page 39) | |

A Accessories



Lens cap raised, 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 39) | |



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

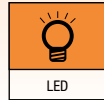
| Colour | Part No. | Comment |
|--|------------|-------------------------|
| ● Red | 704.601.2 | |
| ● Yellow | 704.601.5 | |
| ● Blue | 704.601.6 | |
| ○ Silver | 704.601.8 | |
| ○ Silver | 704.601.81 | Illuminated central dot |
| ● Black | 704.601.0 | |
| ● Black | 704.601.01 | Illuminated central dot |
| | 704.601.9 | Stainless steel |
| For complete lens also order diffuser 704.610.9 (see page 39) | | |



Bezel, raised and flush mount

| Image | Part No. | Product description |
|-------|-----------|---------------------------|
| 1 | 704.600.1 | Aluminium natural, raised |
| 2 | 704.600.0 | Plastic black, raised |
| 2 | 704.600.6 | Plastic grey raised |
| 3 | 704.955.0 | Aluminium black flush |
| 3 | 704.955.1 | Aluminium natural flush |
| 3 | 704.955.9 | Stainless steel, flush |


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A Accessories

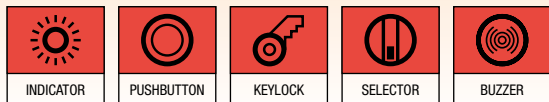
|  | |  | |  | |
|--|-------|--|------------------------------------|---|-----------|
| Protective cover, raised pushbutton | | Protective front ring with silicon membrane for raised or flush mount pushbutton | | Blanking plate | |
| Part No. | Image | Part No. | Size | Part No. | Size |
| 704.925.0 | 1 | 704.600.3 | 29 mm Ø for raised pushbutton | 704.960.7 | 22.5 mm Ø |
| | 2 | 704.955.3 | 35 mm Ø for flush mount pushbutton | 704.964.8 | 30.5 mm Ø |
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A Accessories

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|--|-----------|---------------------|--|-----------|---------------------------------------|---|-----------|-----------|--------|
| LED and lens remover | | | Diffuser for raised indicator, diffuser for flat lens indicator and pushbutton, diffuser for raised pushbutton | | | Marking plate selfadhesive, aluminium black, for raised and flush mount push buttons | | | |
| Image | Part No. | Product description | Image | Part No. | Product description | Image | Part No. | Size | Colour |
| 1 | 61-9740.0 | LED remover | 1 | 704.608.9 | Diffuser for raised indicator | 1 | 704.968.2 | 22.5 mm Ø | Black |
| 2 | 700.006.0 | Lens remover | 2 | 704.609.9 | Diffuser for flat lens | 2 | 704.968.3 | 30.5 mm Ø | Black |
| | | | 3 | 704.610.9 | Diffuser for raised illum. pushbutton | | | | |
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Series 14

22.5mm 30.5mm IP67 5A 250VAC



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A Accessories



Engraving Label for Marking plate, selfadhesive, natural anodised or black aluminium

| Image | Part No. | Size | Colour |
|-------|-----------|-------------|-----------|
| 1 | 704.968.0 | 23.5x14.5mm | Aluminium |
| 2 | 704.968.1 | 23.5x14.5mm | Black |
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Actuator with snap-action switching element

Switching system

Self-cleaning, double-break, snap action switching system (with contact gap 2x0.5mm).

1 normally closed or 1 normally open contact per element.

Snap-action switching elements with soldering terminals at the sides: up to 4 switching element can be on a pushbutton (max. 4 normally closed and 4 normally open contacts).

Snap-action switching element with axial plug-in terminals 2.8mm stackable, only 1 switching element can be on a pushbutton.

Material

Material of contact

Gold plated silver

Switch housing

Plug-in-/soldering terminal

Diallylphthalate DAP, Polyamide 66, Polysulfone, heat-resistant and self-extinguishing

Soldering terminal: PA 6.6 Ultramide

Actuator housing

Polyamide

Mechanical characteristics

Terminals

Snap-action switching element with tinned soldering terminals at the sides:

Max. wire diameter 2 wires à 1.2mm

max. wire cross-section of stranded cable 1 x 1 mm²

Snap-action switching element with axial plug-in terminals, which can also be used as soldering terminals: Plug-in terminal 2.8x0.5mm

Soldering terminal:

Max. wire diameter 2 wires of 1mm

Max. wire cross-section of stranded cable 2x0.75mm² or 1x1.0mm²

Actuating torque

Measured at the key or lever of the keylock- or selector switch 2.5Ncm ... 5.5Ncm, depending on the number of switching elements

Actuating force

Maintain 5 ... 7.8N, depending on the number of switching elements

Momentary 3.2 ... 6N, depending on the number of switching elements

Actuating travel

Illuminated pushbutton: 3mm

Switch actuator 2 positions:

Momentary action 1 x ca. 42° deflection momentary action

Maintained action 1 x ca. 90° deflection maintained action

Rebound time

≤5ms

Mechanical lifetime

Momentary action 2 million Cycles of operation

Maintained action 1 million Cycles of operation

Electrical characteristics

Standards

The devices comply with: EN IEC 61058-1

Rated voltage

250VAC/DC as per EN IEC 61058-15

Contact resistance

New state ≤50mΩ as per DIN IEC 60512-2-4

Electrostatic discharge

Keylock switch 15kV

Rated current

5A

Conventional free air thermal current I_{th}

5A

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

Switch rating

250VAC, 5A (cosφ 1)

250VAC, 3A (cosφ 0.3)

Switch rating AC (cosφ 0.7)

| | | |
|---------|--------|--------|
| Voltage | 125VAC | 250VAC |
|---------|--------|--------|

| | | |
|---------|----|----|
| Current | 3A | 2A |
|---------|----|----|

Switch rating DC (inductive) L:R = 30ms

| | | | | |
|---------|-------|-------|--------|--------|
| Voltage | 24VDC | 60VDC | 110VDC | 220VDC |
|---------|-------|-------|--------|--------|

| | | | | |
|---------|----|------|------|------|
| Current | 2A | 0.7A | 0.2A | 0.1A |
|---------|----|------|------|------|

Electric strength

3000VAC, 50Hz, 1min. between all terminals and earth, as per EN IEC 61058-1-15

Isolation resistance

>7MΩ between the open contacts at 500VDC, as per EN IEC 61058-1-15 (reinforced insulation)

Protection class

Class II

Environmental conditions

Storage temperature

-40°C ... +85°C

Service temperature

-25°C ... +55°C

For indicators and illuminated pushbuttons mounted as a block, make sure the heat can escape freely.

Protection degree

as per EN IEC 60529

front side IP67

Shock resistance

(semi-sinusoidal)

max. 150m/s², pulse width 11ms, 3-axis, as per EN IEC 60068-2-27

Vibration resistance

(sinusoidal)

max. 100m/s² at 10Hz ... 500Hz, as per EN IEC 60068-2-6

Climate resistance

Damp heat state as per EN IEC 60068-2-30

Damp heat cyclic as per EN IEC 60068-2-78

Approvals

Approbations

CB (IEC 61058)
CSA
ENEC (EN 61058)
Germanischer Lloyd
UL

Declaration of conformity

CE

Buzzer

Buzzer system

System

Piezo disc

Material

Alarm buzzer case

Polyamide

Front cap

Plastic Polyamide

Metal Nickel-plated brass (sea-water proof)

Mechanical characteristics

Terminals

Plug-in terminal 2.8x0.5mm

Electrical characteristics

Frequency (tone)

approx. 2.8kHz continuous tone only

Sound pressure

95 db (A) ± 8 dB at a distance of 0.1 m

Operation Voltage/Current

| | |
|-------------------|------------------|
| Operation Voltage | 24VDC $\pm 10\%$ |
| Operation Current | ≤ 25 mA |

Environmental conditions

Storage temperature

$-35^{\circ}\text{C} \dots +85^{\circ}\text{C}$

Operating temperature

$-25^{\circ}\text{C} \dots +55^{\circ}\text{C}$

Protection degree

as per EN IEC 60529, frontside

IP40, devices flush mounting

IP65, devices raised mounting

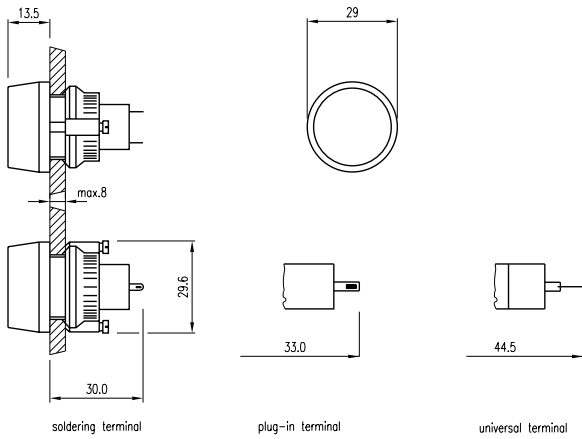
Approvals

Declaration of conformity

CE

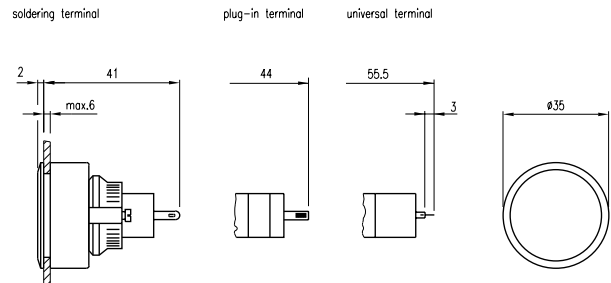
14 Indicator

Raised



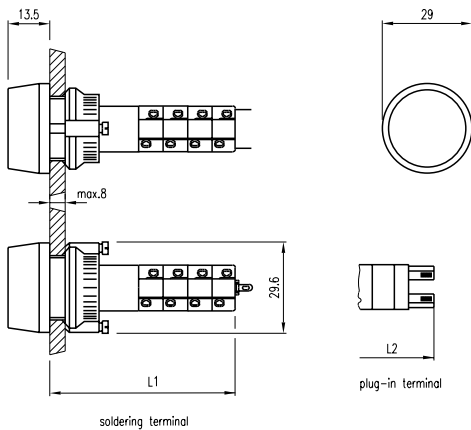
14 Indicator

Flush



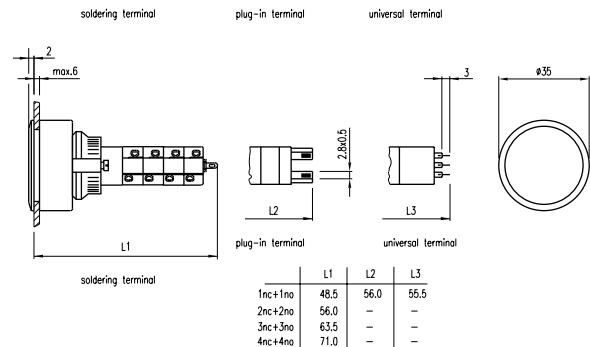
14 Illuminated pushbutton

Raised



14 Illuminated pushbutton

Flush Solder

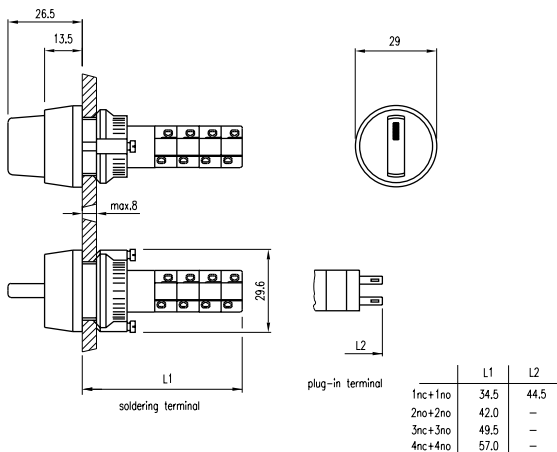


| | L1 | L2 |
|---------|------|------|
| 1nc+1no | 37.5 | 44.5 |
| 2nc+2no | 45.0 | - |
| 3nc+3no | 42.5 | - |
| 4nc+4no | 60.0 | - |

| | L1 | L2 | L3 |
|---------|------|------|------|
| 1nc+1no | 48.5 | 56.0 | 55.5 |
| 2nc+2no | 56.0 | - | - |
| 3nc+3no | 63.5 | - | - |
| 4nc+4no | 71.0 | - | - |

14 Selector switch

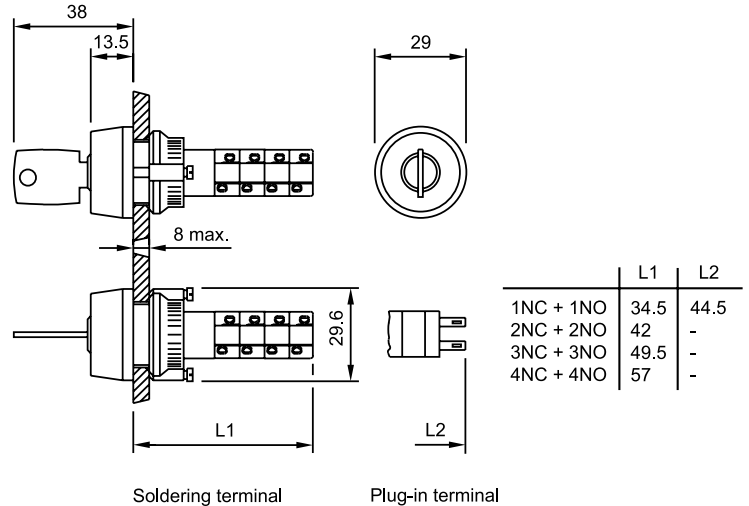
2-Position, Short Lever



| | L1 | L2 |
|---------|------|------|
| 1nc+1no | 34.5 | 44.5 |
| 2no+2no | 42.0 | - |
| 3nc+3no | 49.5 | - |
| 4nc+4no | 57.0 | - |

14 Keylock switch

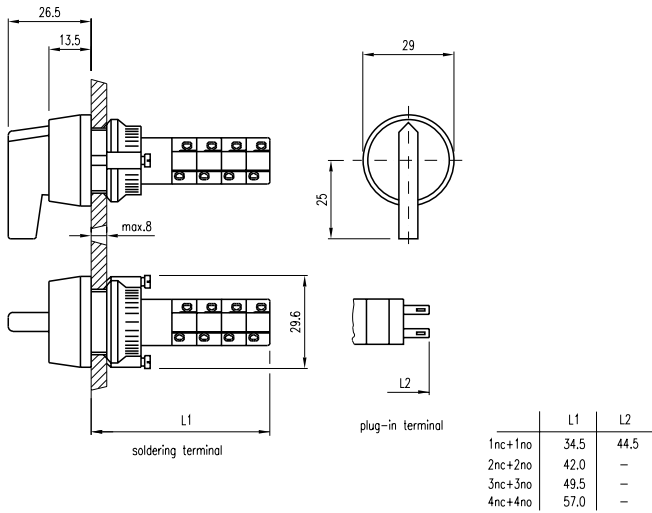
2-Position



| | L1 | L2 |
|-----------|------|------|
| 1NC + 1NO | 34.5 | 44.5 |
| 2NC + 2NO | 42 | - |
| 3NC + 3NO | 49.5 | - |
| 4NC + 4NO | 57 | - |

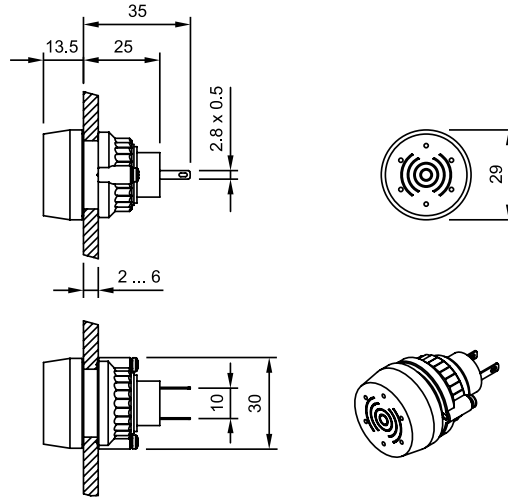
14 Selector switch

2-Position, Long Lever



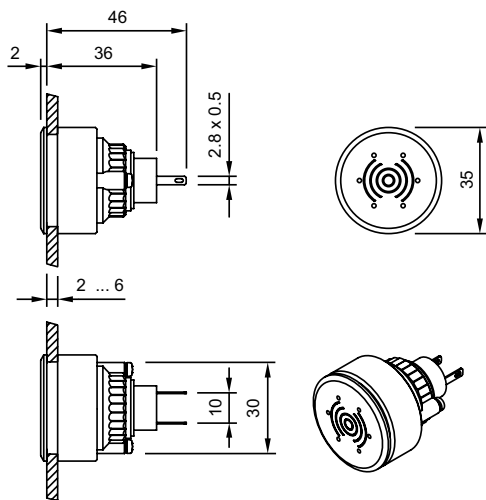
14 Buzzer

Raised



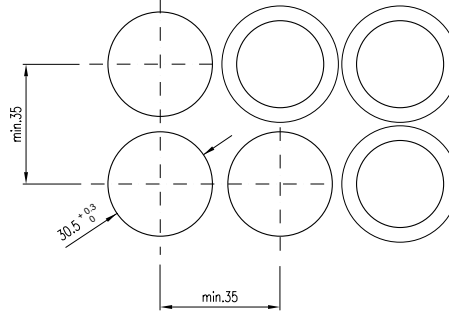
14 Buzzer

Flush



14 Cut-outs

Flush, Buzzer, Pushbutton, Indicator



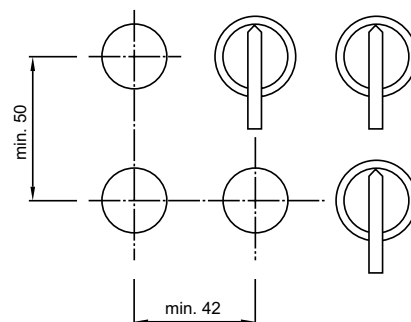
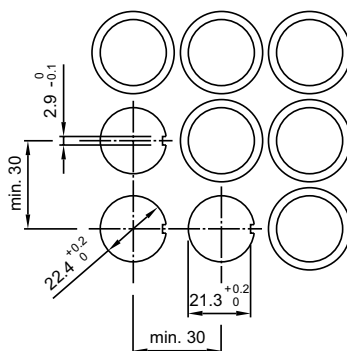
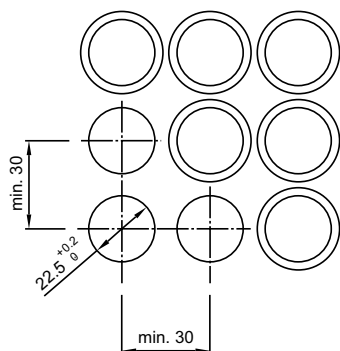
14 Cut-outs

Raised, Pushbuttons, Indicators, Keylocks, Selector

for devices
without anti-twist device

for devices
with anti-twist device (rotary)
(recommended for keylock switch)

for devices
Selector switch long lever



Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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