

Series 31

16 mm IP40 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 31 is a high quality switch range that includes pushbuttons, indicators and buzzers. It is possible to choose up to 4NO/4NC snap-action switching elements per switch. Low level switching elements are also available.

Technical data see page 61

- IP40 Protection
- Switch Rating, 5A, 250VAC
- Raised Mounting into 16 mm cut out
- Illumination using midget-grooved T1¼ lamps or single chip LED's
- All standard lenses are transparent with translucent diffuser available in different colours
- Buzzers voltage from 10 to 75VDC

Indicator



Indicator bodies, raised in round, square and rectangular, black plastic, 16 mm mounting, solder terminals

Image	Part No.	Size
1	31-040.005	18x24 mm
2	31-050.005	18x18 mm
3	31-030.005	18 mm Ø

For complete switch also order **A**

Illuminated pushbutton



Illuminated pushbutton actuator, snap-action, raised, rectangular, black plastic, 16 mm mounting, solder terminals, gold contacts

Part No.	Function	Contact type	Size
31-121.0252	Momentary	1NO/1NC	18x24 mm
31-122.0252	Momentary	2NO/2NC	18x24 mm
31-261.0252	Maintained	1NO/1NC	18x24 mm
31-262.0252	Maintained	2NO/2NC	18x24 mm

For complete switch also order **A**

Illuminated pushbutton



Illuminated pushbutton actuator, snap-action, raised, square, black plastic, 16 mm mounting, solder terminals, gold over silver contacts

Part No.	Function	Contact type	Size
31-151.0252	Momentary	1NO/1NC	18x18 mm
31-152.0252	Momentary	2NO/2NC	18x18 mm
31-281.0252	Maintained	1NO/1NC	18x18 mm
31-282.0252	Maintained	2NO/2NC	18x18 mm

For complete switch also order **A**

Buzzer



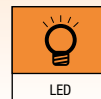
Buzzer, plastic bezel, raised, rectangular, 16 mm mounting, continuous or intermittent tone, 88 dB ±8 at a distance of 0.1 m

Part No.	Function	Contact type	Size
31-131.0252	Momentary	1NO/1NC	18 mm Ø
31-132.0252	Momentary	2NO/2NC	18 mm Ø
31-271.0252	Maintained	1NO/1NC	18 mm Ø
31-272.0252	Maintained	2NO/2NC	18 mm Ø

Image	Part No.	Voltage	Connection
1	31-810.005	10 - 55VAC/10 - 75VDC	Solder terminal
2	31-801.002	10 - 26VDC	Solder-/plug-in terminal

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LED



LED, T1¼ MG, single chip, 12 Volt and 28 Volt.
Also available in 6 Volt, 24 Volt and 48 Volt

Colour	Part No.	Contact type
● Red	10-2J09.1062	12VAC/DC, 15 mA
● Yellow	10-2J09.1064	12VAC/DC, 15 mA
● Green	10-2J09.1065	12VAC/DC, 15 mA
● Blue	10-2J09.1066	12VAC/DC, 15 mA
○ White	10-2J09.1069	12VAC/DC, 15 mA
● Red	10-2J13.1062	28VAC/DC, 14 mA
● Yellow	10-2J13.1064	28VAC/DC, 14 mA
● Green	10-2J13.1065	28VAC/DC, 14 mA
● Blue	10-2J13.1066	28VAC/DC, 14 mA
○ White	10-2J13.1069	28VAC/DC, 14 mA

A Accessories



Lens, opaque for rectangular pushbutton bodies, not for illumination

Colour	Part No.	Size
● Black	31-901.0	18x24 mm



Lens, front transparent/rear translucent for rectangular indicator and pushbutton actuators

Colour	Part No.	Size
● Red	31-903.2	18x24 mm
● Yellow	31-903.4	18x24 mm
● Green	31-903.5	18x24 mm
● Blue	31-903.6	18x24 mm
○ Clear	31-903.7	18x24 mm

A Accessories



Lens, opaque for square pushbutton actuators, not for illumination

Colour	Part No.	Size
● Black	31-951.0	18x18 mm



Lens, front transparent/rear translucent for square indicator and pushbutton actuators

Colour	Part No.	Size
● Red	31-953.2	18x18 mm
● Yellow	31-953.4	18x18 mm
● Green	31-953.5	18x18 mm
● Blue	31-953.6	18x18 mm
○ Clear	31-953.7	18x18 mm



Lens, opaque for round pushbutton actuators, not for illumination

Colour	Part No.	Size
● Black	31-931.0	18 mm Ø

Series 31

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A Accessories



Lens, front transparent with white diffuser for round indicator and pushbutton actuators



Flap guard, raised, square and rectangular



Sprayproof cover, square and rectangular, IP65

Colour	Part No.	Size	Image	Part No.	Size	Image	Part No.	Comment
● Red	31-933.2	18 mm Ø	1	31-925	18x24 mm	1	31-924.2	PVC rear, silicon front
● Yellow	31-933.4	18 mm Ø	2	31-920	18x18 mm	2	31-923	Both PVC
● Green	31-933.5	18 mm Ø						
● Blue	31-933.6	18 mm Ø						
○ Clear	31-933.7	18 mm Ø						

A Accessories



Blanking plate



Mounting tool, lens and LED remover

Image	Part No.	Size	Image	Part No.	Product description
1	01-947.0	18x24 mm	1	01-907	Mounting tool
2	01-948.0	18x18 mm	2	02-905	Lens remover
3	01-949.0	18 mm Ø	3	61-9740.0	LED remover

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 element can be on a pushbutton (max.

4 Normally closed and 4 Normally open contacts).

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

Material

Material of contact

Gold plated silver

Switch housing

Axial plug-in-/soldering terminal 2.8 mm:

Diallylphthalate (DAP), Polyamide (PA66), Polysulfone,

heat-resistant and self-extinguishing

Soldering terminal: PA 6.6 Ultramide

Actuator housing

Polyetherimide, self-extinguishing

Mechanical characteristics

Terminals

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 mm²

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 1 wire of 1.5 mm²

Max. wire cross-section of stranded cable 2 x 0.75 mm² or 1 x 1.0 mm²

Actuating force

2 N ... 5.5 N, depending on the number of switching elements

Actuating travel

3 mm

Rebound time

≤ 5 ms

Mechanical lifetime

Momentary action 2 million cycles of operation

Maintained action 1 million cycles of operation

Electrical characteristics

Standards

IEC 61058, EN 61058

Rated voltage

250 VAC/VDC

Rated current

5 A

Contact resistance

Starting value (initial) ≤ 50 mΩ

Conventional free air thermal current

5 A

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

Switch rating

250 VAC, 5 A (cosφ 1)

250 VAC, 3 A (cosφ 0.3)

Switch rating AC (cosφ 0.7)

Voltage	125 VAC	250 VAC
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Current	3 A	2 A
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Switch rating DC (inductive) L:R = 30 ms

Voltage	24 VDC	60 VDC	110 VDC	220 VDC
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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 60512-2-11

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

Front as per:

IP40

IP65 with spray cover

Shock resistance

(Single impacts, semi-sinusoidal)

15 g for 11 ms, as per IEC 60512-4-3, IEC 60068-2-27

Vibration resistance

(sinusoidal)

10 g at 0-2000 Hz, amplitude 1.5 mm, as per IEC 60512-4-4,

IEC 60068-2-6

Climate resistance

Standard condition, as per IEC 60068-2-3 and 2-30

Changing condition, as per IEC 60068-2-14 and 2-33

Approvals

Approbations

CB (IEC 61058)

CSA

ENEC (EN 61058)

Germanischer Lloyd

UL

Declaration of conformity

CE

Buzzer Typ-Nr. 31-810.005

Switching system

Buzzer system

Electronic non-contacting buzzer
with IC oscillator

Material

Alarm buzzer case

Polyetherimide

Front bezel

Polyamide

Mechanical characteristics

Terminals

Soldering terminal

Electrical characteristics

Frequency (tone)

Approx. 2.8 kHz

Interval frequency

approx. 3 Hz

Sound pressure

88 dB (A) \pm 8 dB at a distance of 0.1 m

Volume variable with a 1 M Ω potentiometer or corresponding fixed resistor

Operation Voltage/Current

Typ. 10 VAC ... 55 VAC, 25 mA

Typ. 10 VDC ... 75 VDC, 15 mA

Environmental conditions

Storage temperature

-40 °C ... +85 °C

Service temperature

-25 °C ... +55 °C

Protection degree

IP40

Approvals

Approbations

Germanischer Lloyd

Declaration of conformity

CE

Buzzer Typ-Nr. 31-801.002

Switching system

Buzzer system

Electronic non-contacting buzzer
with IC oscillator

Material

Alarm buzzer case

Polyetherimide

Front bezel

Polyamide

Mechanical characteristics

Terminals

Plug-in terminal 2.8x0.5 mm

Electrical characteristics

Frequency (tone)

ca. 2.0 kHz

Interval frequency

2 Hz

Sound pressure

88 db (A) \pm 8 dB at a distance of 0.1 m

Operation Voltage/Current

10 VDC ... 26 VDC, \leq 20 mA

Environmental conditions

Storage temperature

-40 °C ... +85 °C

Service temperature

-25 °C ... +55 °C

Protection degree

IP40

Approvals

Approbations

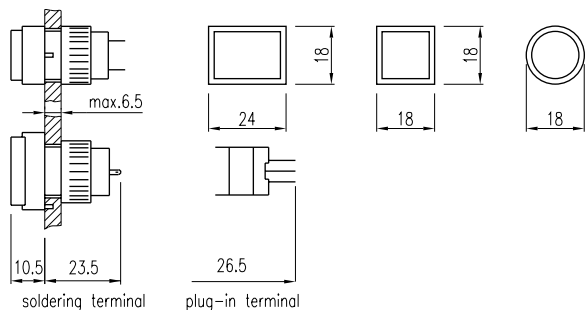
Germanischer Lloyd

Declaration of conformity

CE

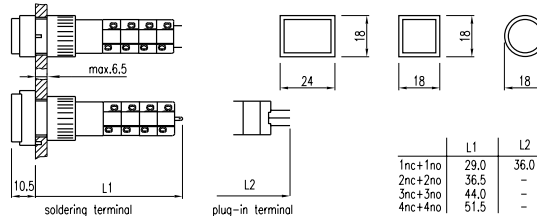
31 Indicator

Raised, Round, Square, Rectangular



31 Pushbutton

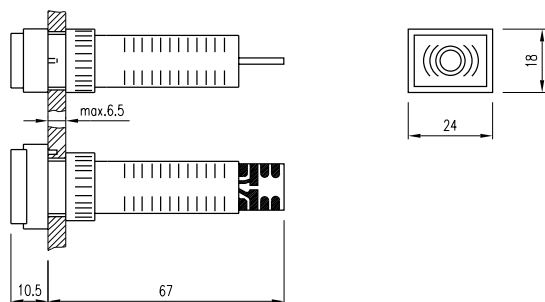
Illuminated, Raised, Round, Square, Rectangular



	L1	L2
1nc+1no	29.0	36.0
2nc+2no	36.5	-
3nc+3no	44.0	-
4nc+4no	51.5	-

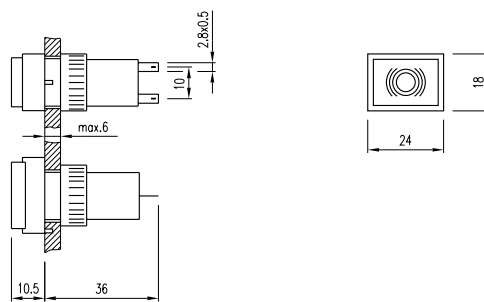
31 Buzzer

Raised



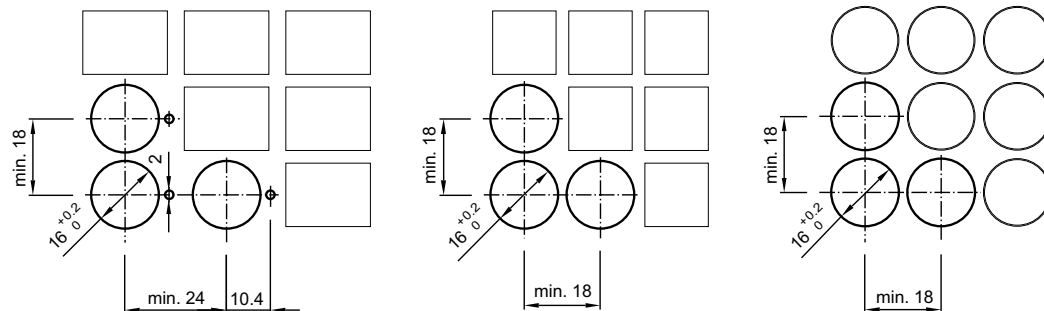
31 Buzzer

Raised, Solder-/plug-in terminal



31 Cut-outs

Raised, Round, Square, Rectangular



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

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9