

Metal Switch, Latching Action, Switching Voltage up to 125 VDC / 250 VAC

new



Metal Switch with ceramic actuator  
Surface backlighting  
white



Metal Switch with ceramic actuator  
Surface backlighting  
red



Newly available with bright illumination

See below:

#### Approvals and Compliances

#### Description

- Switch available in version: Standard (ST), with Lettering (LE), with area illumination (AI)
- Available with bright illumination
- Available with 12 A and 16 A switching current Assembly by mounting with nut and subsequent clipping of the switching element
- Equipped with flat-pin plugs to permit fast connection

#### Characteristics

- Housing material: high-quality stainless steel, actuator material: highly durable ceramic
- with or without surface backlighting in different colours
- Switching voltage up to 125 VDC respectively 250 VAC, switching current up to 16 A
- available with single-pole and double-pole switching system, switching status is easy to discern by looking at or feeling the resting position of the actuator
- For use in harsh environments (see technical data)

#### References

Alternative: Standard version [MSM 16](#)

Alternative: double-pole switch: [MSM DP 19](#); [MSM DP 22](#); [MSM DP 30](#)

Alternative: Other diameter [MSM LA CS 22](#)

Alternative: switch with latching function:

#### Weblinks

[pdf data sheet](#), [html datasheet](#), [General Product Information](#), [CAD-Drawings](#), [Product News](#), [Detailed request for product](#), [Video](#)

#### Technical Data

##### Electrical Data

|                                 |                                                                                                                             |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Switching Function              | latching                                                                                                                    |
| Number of Poles                 | SPST, DPST                                                                                                                  |
| Supply Voltage                  | 24 VDC Surface backlighting                                                                                                 |
| Impulse Withstand Voltage (ESD) | 4 kV MSM LA CS ST                                                                                                           |
| Switching Voltage               | max. 250 VAC, 30 VDC (125 VDC at 0.5 A)                                                                                     |
| Switching Current               | 12 A AC / 16 A AC                                                                                                           |
| Rated Switching Capacity        | 3000 W                                                                                                                      |
| Lifetime                        | 0.05 million actuations (250 VAC / 8 A), 0.1 million actuations (125 VDC / 0,5 A), 0.02 million actuations (250 VAC / 16 A) |
| Contact Resistance              | < 100 mΩ (12 VDC / 1 A)                                                                                                     |
| Insulation Resistance           | > 100 MΩ 500 VDC                                                                                                            |

##### Mechanical Data

|                                           |                        |
|-------------------------------------------|------------------------|
| Actuating Force                           | 10 N                   |
| Actuating Travel                          | 5.2 mm,                |
| Lifetime                                  | 0.1 million actuations |
| Contact Gap                               | 3 mm                   |
| Shock Protection                          | IK 07                  |
| Mounting screw torque Plastic Nut         | max. 4.5 Nm            |
| Mounting screw torque Stainless Steel Nut | max. 12 Nm             |

##### Climatical Data

|                                        |                                   |
|----------------------------------------|-----------------------------------|
| Operating Temperature                  | -20 to 85 °C                      |
| Storage Temperature                    | -20 to 85 °C                      |
| Protection Class                       | IP64                              |
| Switching Unit                         | IP40                              |
| Salt Spray Test (acc. to DIN 50021-SS) | 24 h / 48 h / 96 h Residence Time |

##### Material

|                                  |                                      |
|----------------------------------|--------------------------------------|
| Housings                         | Stainless Steel                      |
| Actuator (disc, outside housing) | Ceramics                             |
| Seal Ring                        | NBR70                                |
| Switcher Collet                  | PA66 (UL94-V0 related to d ≥ 1.6 mm) |
| Intermediate Connector           | PA66 (UL94-V0 related to d ≥ 1.6 mm) |
| Contact Pin Adapter              | PA66 (UL94-V0 related to d ≥ 1.6 mm) |

#### Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in [Details about Approvals](#)

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

## Product standards

Product standards that are referenced

| Organization                                                                     | Design                | Standard       | Description                                           |
|----------------------------------------------------------------------------------|-----------------------|----------------|-------------------------------------------------------|
|  | Designed according to | DIN EN 61058-1 | Switches for appliances. Part 1. General requirements |
|  | Designed according to | UL 1054        | UL standard for safety special-use switches           |

## Application standards

Application standards where the product can be used

| Organization                                                                     | Design                         | Standard       | Description                                                                                                          |
|----------------------------------------------------------------------------------|--------------------------------|----------------|----------------------------------------------------------------------------------------------------------------------|
|  | Designed for applications acc. | IEC/UL 62368-1 | IEC 62368-1 includes the basic requirements for safety of audio, video, information technology and office equipment. |

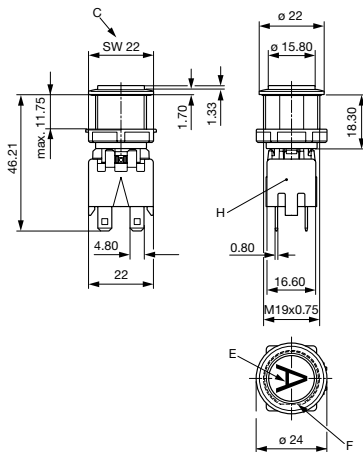
## Compliances

The product complies with following Guide Lines

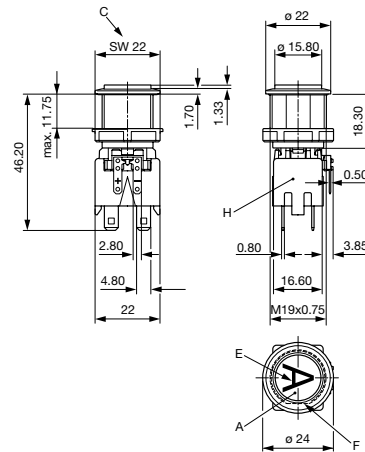
| Identification                                                                   | Details | Initiator   | Description                                                                                                                                                             |
|----------------------------------------------------------------------------------|---------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | RoHS    | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863                                                                                                                      |
|  | REACH   | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force. |

**Dimension [mm]**

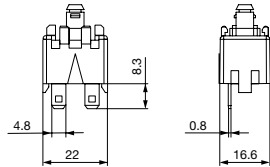
MSM 19 LA CS ST / double-pole



MSM 19 LA CS AI / double-pole



## Switching Element single-pole with Push Button Holder



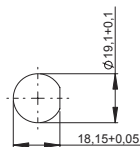
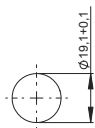
### Legend

A = Illumination Area  
 C = Width Across Flats  
 D = Knurled Nut  
 E = Lettering  
 F = Anti-Rotation  
 H = Switching Element

### Dimension

MSM 19 LA CS (without torsion protection)

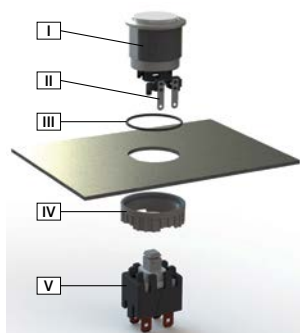
MSM 19 LA CS (with torsion protection)



Drilling diagram

Drilling diagram

### Assembly Instructions



I Housing

II Flat Pin Terminal (Illumination)

III Gasket

IV Nut (Nut type see Dimensions)

V Module Switching Contact

Installation Instruction:

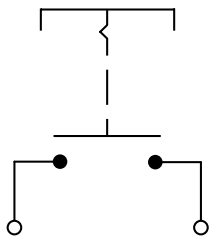
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

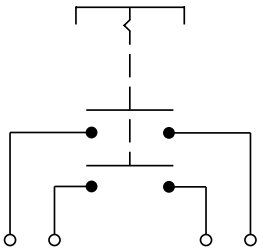
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN VDE 0100-100 or alternatively IEC 60354 standard

Diagrams

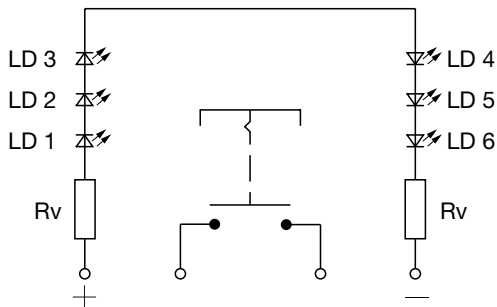
MSM LA CS ST / single-pole



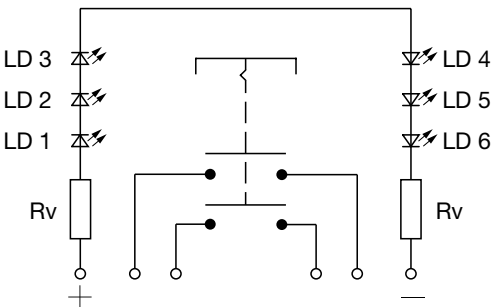
MSM LA CS ST / double-pole



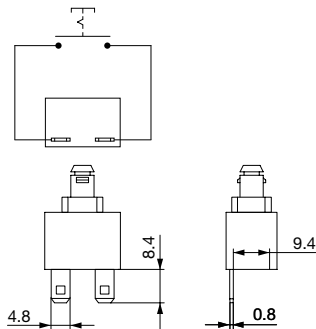
MSM LA CS AI / single-pole



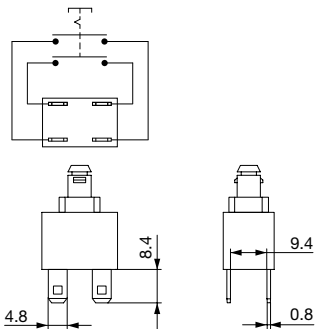
MSM LA CS AI / double-pole



Contact Layout single-pole



Contact Layout double-pole



Lettering

|                                                                 |                      |
|-----------------------------------------------------------------|----------------------|
| The last three digits in the order number define the lettering: |                      |
| 000                                                             | No Lettering         |
| 001-074                                                         | Standard Lettering   |
| 101-                                                            | Customized Lettering |

Lettering Colour of Laser Lettering

| Material | Lettering Colour |                |
|----------|------------------|----------------|
| Ceramic  | black            | Filled letters |

## Order Index Lettering

| Laser Marking |        |             |             |
|---------------|--------|-------------|-------------|
| 001 =A        | 021 =U | 041 =÷      | 061 =EIN    |
| 002 =B        | 022 =V | 042 =*      | 062 =AUS    |
| 003 =C        | 023 =W | 043 ==      | 063 =AUF    |
| 004 =D        | 024 =X | 044 =#      | 064 =AB     |
| 005 =E        | 025 =Y | 045 =↔      | 065 =ON     |
| 006 =F        | 026 =Z | 046 =↑      | 066 =OFF    |
| 007 =G        | 027 =0 | 047 =→      | 067 =UP     |
| 008 =H        | 028 =1 | 048 =←      | 068 =DOWN   |
| 009 =I        | 029 =2 | 049 =↓      | 069 =HIGH   |
| 010 =J        | 030 =3 | 050 =↑      | 070 =LOW    |
| 011 =K        | 031 =4 | 051 =%      | 071 =ON/OFF |
| 012 =L        | 032 =5 | 052 =√      | 072 =START  |
| 013 =M        | 033 =6 | 053 =CTRL   | 073 =RESET  |
| 014 =N        | 034 =7 | 054 =RETURN | 074 =🔌      |
| 015 =O        | 035 =8 | 055 =SHIFT  | 075 =💡      |
| 016 =P        | 036 =9 | 056 =LOCK   | 076 =🔔      |
| 017 =Q        | 037 =+ | 057 =STOP   | 077 =①      |
| 018 =R        | 038 =- | 058 =ENTER  |             |
| 019 =S        | 039 =. | 059 =BACK   |             |
| 020 =T        | 040 =x | 060 =LINE   |             |

## All Variants

| Diameter | Number of Poles | Switching Current | Illumination, LED           | Torsion Protection Housing/Actuator | Config. Code           | Order Number      |
|----------|-----------------|-------------------|-----------------------------|-------------------------------------|------------------------|-------------------|
| [mm]     |                 | [A]               |                             |                                     |                        |                   |
| 19       | DPST            | 12                | non-illuminated             | yes / yes                           | MSM 19 LA CS Pcs       | 1241.7221.1120000 |
| 19       | DPST            | 12                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS AI red    | 1241.8550         |
| 19       | DPST            | 12                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS AI green  | 1241.8551         |
| 19       | DPST            | 12                | Backlighted, yellow, 24 VDC | yes / yes                           | MSM 19 LA CS AI yellow | 1241.8552         |
| 19       | DPST            | 12                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS AI blue   | 1241.8553         |
| 19       | DPST            | 12                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS AI white  | 1241.8554         |
| 19       | DPST            | 12                | Backlighted, orange, 24 VDC | yes / yes                           | MSM 19 LA CS AI orange | 1241.8555         |
| 19       | SPST            | 12                | non-illuminated             | yes / yes                           | MSM 19 LA CS Pcs       | 1241.7221.1110000 |
| 19       | SPST            | 12                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS AI red    | 1241.8544         |
| 19       | SPST            | 12                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS AI green  | 1241.8545         |
| 19       | SPST            | 12                | Backlighted, yellow, 24 VDC | yes / yes                           | MSM 19 LA CS AI yellow | 1241.8546         |
| 19       | SPST            | 12                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS AI blue   | 1241.8547         |
| 19       | SPST            | 12                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS AI white  | 1241.8548         |
| 19       | SPST            | 12                | Backlighted, orange, 24 VDC | yes / yes                           | MSM 19 LA CS AI orange | 1241.8549         |
| 19       | DPST            | 16                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS AI blue   | 3-101-010         |
| 19       | DPST            | 16                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS AI white  | 3-101-011         |
| 19       | DPST            | 16                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS AI red    | 3-101-023         |
| 19       | DPST            | 16                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS AI green  | 3-101-024         |
| 19       | SPST            | 16                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS AI red    | 3-101-005         |
| 19       | SPST            | 16                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS AI green  | 3-101-007         |
| 19       | SPST            | 16                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS AI blue   | 3-101-009         |
| 19       | SPST            | 16                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS AI white  | 3-101-022         |

Legend:

Type:

MSMCS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

AI = BL = Full Surface Backlighting: Lettering possible (see Lettering, last 3 digits)

Customer-specific versions available on request.  
Special materials for use in salt and chlorinated environment on request.  
The MOQ for standard laser lettering on standard variants is a packing unit.  
5 VDC and 12 VDC RI variants on request (MOQ 500 pieces)  
The nut with gasket and micro switch are enclosed in the box.

**Most Popular.**

Availability for all products can be searched real-time: <https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER>

|                       |                       |
|-----------------------|-----------------------|
| <b>Packaging unit</b> | 10 in box with insert |
|-----------------------|-----------------------|



- Actuating elements in ESD safe packaging
- Screw nuts and sealing rings in a bag (enclosed in the box)
- Micro switches (enclosed in the box)

## Accessories

### Description



## Power Supply

Power Supply IP42 for LED- and Illumination applications indoor 90~264 VAC => 24 VDC 0.34 A 8 W

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А