

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

Alternative: switch with latching function:

### Weblinks

[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<br>5 VDC and 12 VDC variants on request (MOQ 500 pieces)  |
| 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 60950 | IEC 60950-1 includes the basic requirements for the safety of information technology equipment. |

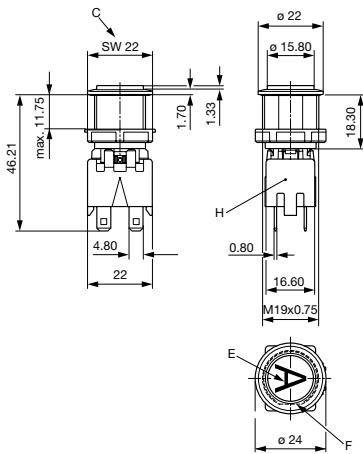
Compliances

The product complies with following Guide Lines

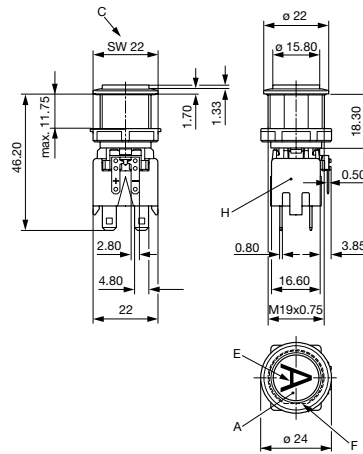
| Identification   | Details | Initiator   | Description   |
|--|---------|-------------|---|
|   | RoHS    | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863  |
|  | REACH   | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and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

Dimension [mm]

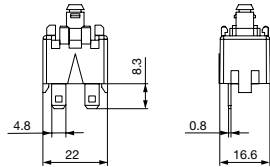
MSM 19 LA CS ST / double-pole



MSM 19 LA CS AI / double-pole



## Switching Element single-pole with Push Button Holder



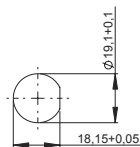
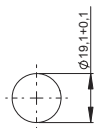
### Legend

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)

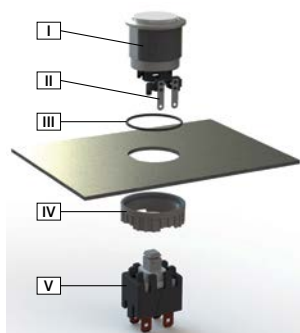
MSM 19 LA CS (with torsion protection)



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:

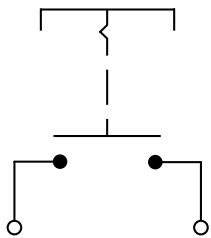
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

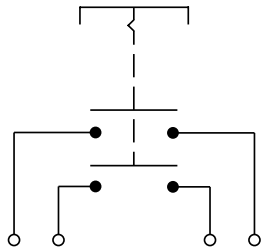
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

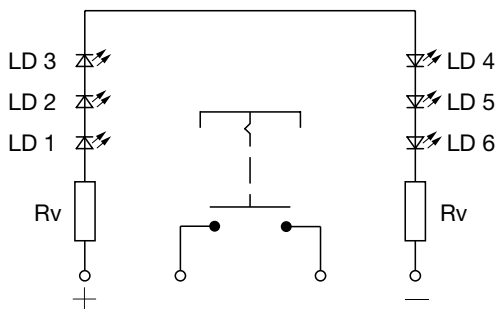
MSM LA CS ST / single-pole



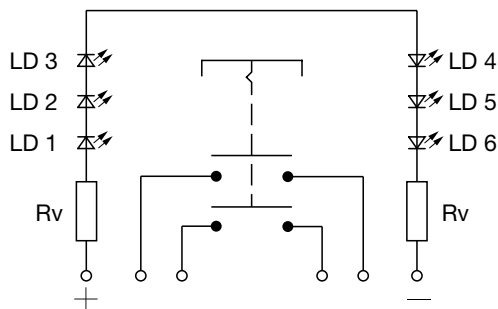
MSM LA CS ST / double-pole



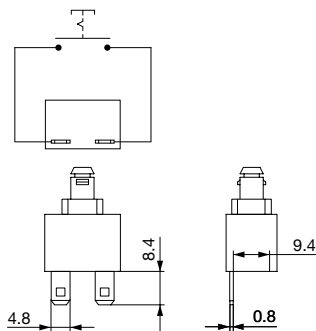
MSM LA CS AI / single-pole



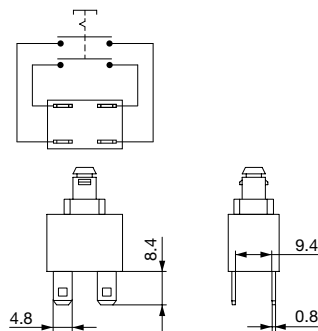
MSM LA CS AI / double-pole



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

## 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 Al red    | 1241.8550         |
| 19       | DPST            | 12                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS Al green  | 1241.8551         |
| 19       | DPST            | 12                | Backlighted, yellow, 24 VDC | yes / yes                           | MSM 19 LA CS Al yellow | 1241.8552         |
| 19       | DPST            | 12                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS Al blue   | 1241.8553         |
| 19       | DPST            | 12                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS Al white  | 1241.8554         |
| 19       | DPST            | 12                | Backlighted, orange, 24 VDC | yes / yes                           | MSM 19 LA CS Al 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 Al red    | 1241.8544         |
| 19       | SPST            | 12                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS Al green  | 1241.8545         |
| 19       | SPST            | 12                | Backlighted, yellow, 24 VDC | yes / yes                           | MSM 19 LA CS Al yellow | 1241.8546         |
| 19       | SPST            | 12                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS Al blue   | 1241.8547         |
| 19       | SPST            | 12                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS Al white  | 1241.8548         |
| 19       | SPST            | 12                | Backlighted, orange, 24 VDC | yes / yes                           | MSM 19 LA CS Al orange | 1241.8549         |
| 19       | DPST            | 16                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS Al blue   | 3-101-010         |
| 19       | DPST            | 16                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS Al white  | 3-101-011         |
| 19       | DPST            | 16                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS Al red    | 3-101-023         |
| 19       | DPST            | 16                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS Al green  | 3-101-024         |
| 19       | SPST            | 16                | Backlighted, red, 24 VDC    | yes / yes                           | MSM 19 LA CS Al red    | 3-101-005         |
| 19       | SPST            | 16                | Backlighted, green, 24 VDC  | yes / yes                           | MSM 19 LA CS Al green  | 3-101-007         |
| 19       | SPST            | 16                | Backlighted, blue, 24 VDC   | yes / yes                           | MSM 19 LA CS Al blue   | 3-101-009         |
| 19       | SPST            | 16                | Backlighted, white, 24 VDC  | yes / yes                           | MSM 19 LA CS Al white  | 3-101-022         |

Legend:

Type:

MSMCS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

- ## Accessories

### Description



## Power Supply

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

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

## Schurter:

[1241.7221.1110000](#) [1241.7221.1120000](#) [1241.7226.1111000](#) [1241.7226.1112000](#) [1241.7226.1113000](#)  
[1241.7226.1114000](#) [1241.7226.1115000](#) [1241.7226.1117000](#) [1241.7226.1121000](#) [1241.7226.1122000](#)  
[1241.7226.1123000](#) [1241.7226.1124000](#) [1241.7226.1125000](#) [1241.7226.1127000](#) [1241.7231.1110000](#)  
[1241.7231.1120000](#) [1241.7236.1111000](#) [1241.7236.1112000](#) [1241.7236.1113000](#) [1241.7236.1114000](#)  
[1241.7236.1115000](#) [1241.7236.1117000](#) [1241.7236.1121000](#) [1241.7236.1122000](#) [1241.7236.1123000](#)  
[1241.7236.1124000](#) [1241.7236.1125000](#) [1241.7236.1127000](#) [1241.8544](#) [1241.8545](#) [1241.8547](#) [1241.855](#)  
[1241.8551](#) [1241.8553](#) [1241.8548](#) [1241.8554](#) [1241.8563](#) [1241.8559](#) [1241.8557](#) [1241.856](#) [1241.8565](#) [1241.8562](#)  
[1241.8566](#) [1241.8556](#) [3-101-023](#) [3-101-010](#) [3-101-022](#) [3-101-009](#) [3-101-005](#) [3-101-024](#) [3-101-007](#) [3-101-011](#) [3-](#)  
[101-032](#) [3-101-029](#) [3-101-041](#) [3-101-033](#) [3-101-039](#) [3-101-031](#) [3-101-030](#) [3-101-040](#) [1241.7236.1113075](#)  
[1241.8550](#) [1241.8560](#) [3-102-134](#)