

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



Newly available with bright illumination



Metal Switch with ceramic actuator
 Illumination area
 white



Metal Switch with ceramic actuator
 Illumination area
 red

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 LA CS 19](#)
- Alternative: switch with backlighted illumination:
- Alternative: Other diameter
- 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 Illumination area |
| Impulse Withstand Voltage (ESD) | 2 kV with Ring Illumination |
| 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 | IK07 |
| Mounting screw torque Plastic Nut | max. 3.5 Nm |
| Mounting screw torque Stainless Steel Nut | max. 16 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 | |
| Housing | 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) |
| Plastic Nut | PA, UL94 |



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 | Audio/video, information and communication technology equipment - Part 1: Safety requirements |

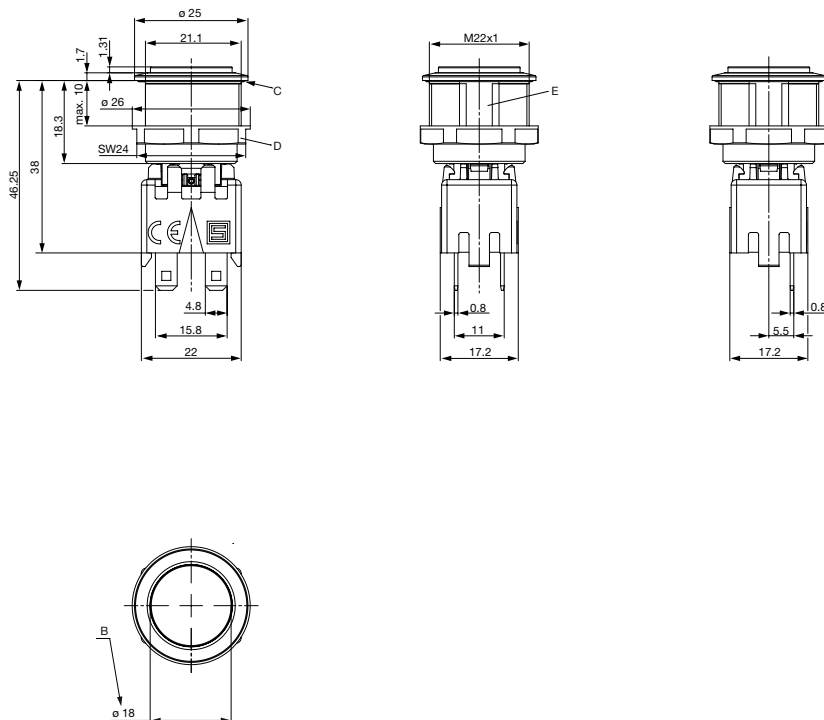
Compliances

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]

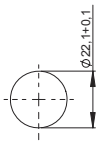
MSM 22 LA CS ST / double-pole



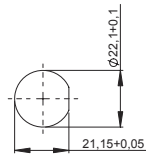
Dimension

MSM 22 LA CS (without torsion protection)

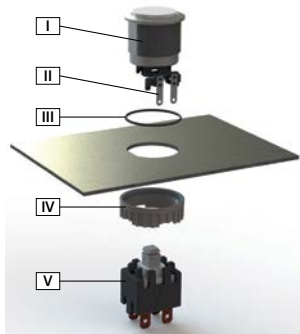
MSM 22 LA CS (with torsion protection)



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:

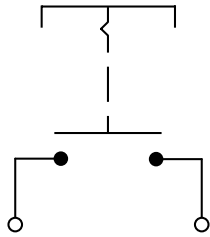
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

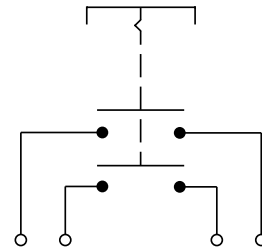
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

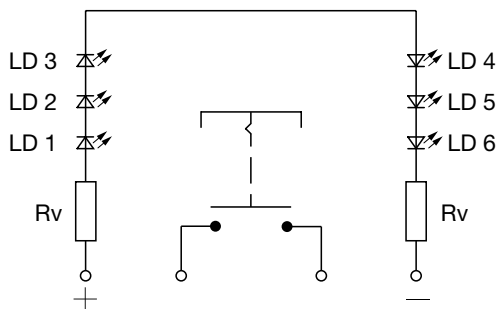
MSM LA CS ST / single-pole



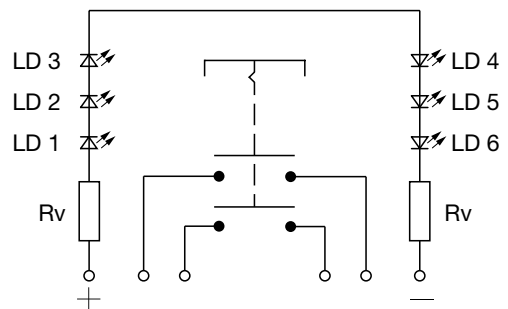
MSM LA CS ST / double-pole



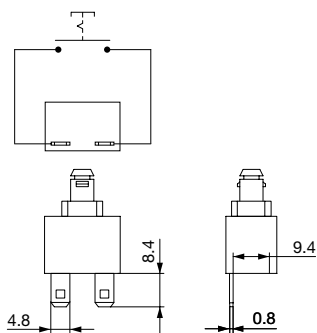
MSM LA CS AI / single-pole



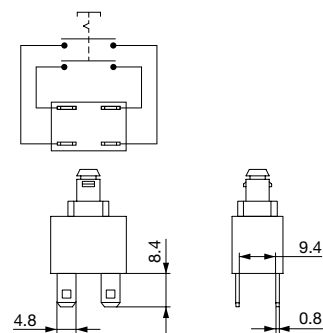
MSM LA CS AI / double-pole



Contact Layout single-pole



Contact Layout double-pole



Marking

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 =⓪ |
| 018 =R | 038 =- | 058 =ENTER | |
| 019 =S | 039 =. | 059 =BACK | |
| 020 =T | 040 =x | 060 =LINE | |

Please note that the font size depends on the number of characters

All Variants

| Diameter | Switching Current | Switching Voltage | Illumination, LED | Housing Material | Torsion Protection Housing/Actuator | Electrical contact | Config. Code | Order Number |
|----------|-------------------|-------------------|----------------------------|------------------|-------------------------------------|--------------------|-----------------------|-------------------|
| [mm] | [A] | [VAC/ VDC] | | | | | | |
| 22 | 12 | 250 VAC | Backlighted, red, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI red | 1241.8556 |
| 22 | 12 | 250 VAC | Backlighted, green, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI green | 1241.8557 |
| 22 | 12 | 250 VAC | Backlighted, blue, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI blue | 1241.8559 |
| 22 | 12 | 250 VAC | Backlighted, white, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI white | 1241.8560 |
| 22 | 12 | 250 VAC | non-illuminated | Stainless Steel | yes / yes | SPST | MSM 22 LA CS Pcs | 1241.7231.1110000 |
| 22 | 12 | 250 VAC | Backlighted, red, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI red | 1241.8562 |
| 22 | 12 | 250 VAC | Backlighted, green, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI green | 1241.8563 |
| 22 | 12 | 250 VAC | Backlighted, blue, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI blue | 1241.8565 |
| 22 | 12 | 250 VAC | Backlighted, white, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI white | 1241.8566 |
| 22 | 12 | 250 VAC | non-illuminated | Stainless Steel | yes / yes | DPST | MSM 22 LA CS Pcs | 1241.7231.1120000 |
| 22 | 16 | 250 VAC | Backlighted, blue, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI blue | 3-101-029 |
| 22 | 16 | 250 VAC | Backlighted, white, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI white | 3-101-030 |
| 22 | 16 | 250 VAC | Backlighted, red, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI red | 3-101-031 |
| 22 | 16 | 250 VAC | Backlighted, red, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI red | 3-101-032 |
| 22 | 16 | 250 VAC | Backlighted, green, 24 VDC | - | yes / yes | SPST | MSM 22 LA CS AI green | 3-101-033 |
| 22 | 16 | 250 VAC | Backlighted, green, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI green | 3-101-039 |
| 22 | 16 | 250 VAC | Backlighted, blue, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI blue | 3-101-040 |
| 22 | 16 | 250 VAC | Backlighted, white, 24 VDC | - | yes / yes | DPST | MSM 22 LA CS AI white | 3-101-041 |

Legend:

Type:

MSMCS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

IP65 degree of protection front side contact areadegree of protection rear side contact area IP40 or IP67 optional -> see Technical Data Micro Switch

Customer-specific versions available on request.

Special materials for use in salt and chlorinated environment on request.

| Diameter | Switching Current | Switching Voltage | Illumination, LED | Housing Material | Torsion Protection Housing/Actuator | Electrical contact | Config. Code | Order Number |
|----------|-------------------|-------------------|-------------------|------------------|-------------------------------------|--------------------|--------------|--------------|
| [mm] | [A] | [VAC/VDC] | | | | | | |

The MOQ for standard laser lettering on standard variants is a packing unit.

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>

Packaging unit

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