

Metal Switch Short Stroke



Non-illuminated
Actuator stainless steel



Point Illumination
red / green
Actuator stainless steel



Non-illuminated
Actuator zinc die-cast

new

See below:
[Approvals and Compliances](#)

Description

- Momentary action switch available in version Standard, with Point Illumination, Lettering
- Assembly by mounting with nut
- Pin connections, Pins with Soldering Aid or Clip for Pins

Unique Selling Proposition

- Very low mounting depth
- High ingress protection IP67
- Resistant against vandalism
- Long lifetime

Characteristics

- Housing zinc die-cast with nickel plating and two actuator material types: zinc die-cast with nickel plating or stainless steel
- Wide range of materials, colours, lettering, colours of illumination
- Switching voltage max. 48 VDC, switching current max. 125 mA
- Zinc die-cast for housing and actuator
With or without illumination, no lettering
- Stainless Steel for actuator
Optional point illumination and optional laser lettering with standard or customer-specific symbols

Weblinks

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

Technical Data

Electrical Data

| | |
|---------------------------------|---|
| Switching Function | N.O. |
| Supply Voltage | LED operating data are listed in separate table |
| Impulse Withstand Voltage (ESD) | 8 kV with Ring Illumination |

Contact Material Silver

| | |
|--------------------------|--|
| Switching Voltage | min. 4 VDC , max. 48 VDC |
| Switching Current | max. 125 mA |
| Rated Switching Capacity | 1.2 W |
| Lifetime | 1 million actuations at Rated Switching Capacity |
| Contact Resistance | < 50mΩ, < 150 mΩ after lifetime |
| Insulation Resistance | > 100 MΩ |
| Duration of Bounce | < 1 ms |

Contact Material Gold

| | |
|--------------------------|--|
| Switching Voltage | min. 50 mVDC, max. 24 VDC |
| Switching Current | max. 80 mA |
| Rated Switching Capacity | 0.36 W |
| Lifetime | 1 million actuations at Rated Switching Capacity |
| Contact Resistance | < 50mΩ, < 150 mΩ after lifetime |
| Insulation Resistance | > 100 MΩ |
| Duration of Bounce | < 1 ms |

Mechanical Data

| | |
|-----------------------|---|
| Actuating Force | Max. 5 N |
| Actuating Travel | Max. 0.4 mm |
| Lifetime | 1 million actuations |
| Shock Protection | IK06 |
| Mounting screw torque | 0.4 Nm with Sealing Ring, 1.5 Nm without Sealing Ring |

Climatical Data

| | |
|--|-----------------------------------|
| Operating Temperature | -20 to 60 °C |
| Storage Temperature | -20 to 60 °C |
| Protection Class | IP67 with O-Ring |
| Salt Spray Test (acc. to DIN 50021-SS) | 24 h / 48 h / 96 h Residence Time |

Other Data

| | |
|------------------|---------|
| Contact Material | Ag / Au |
|------------------|---------|

Soldering Data

| | |
|------------------------------|---|
| Tinning | 260 °C / 2 sec according to DIN IEC 60068-2-20 |
| Solderability | 260 °C / 2 sec (IEC 60068-2-20 Test Ta Method 1) |
| Resistance to Soldering Heat | 260 °C / 5 sec (IEC 60068-2-20 Test Tb Method 1A) |

Material

| | |
|---------------------|--------------------------------|
| Housing | Zinc Die Casting Nickel Plated |
| Actuator unlettered | Zinc Die Casting Nickel Plated |
| Actuator lettered | Stainless Steel 1.4301 |
| Contact | CuZn37 2,5 µm Ag |
| Snap Dome | X 12 CrNi 177 gold plated |
| Socket | PA |



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.



Application standards

Application standards where the product can be used

| Organization | Design | Standard | Description |
|--|--------------------------------|----------------|---|
|  | Designed for applications acc. | EMC Directive: | EMC directive 2004/108/EWG |
|  | Designed for applications acc. | IEC/UL 62368-1 | Audio/video, information and communication technology equipment - Part 1: Safety requirements |

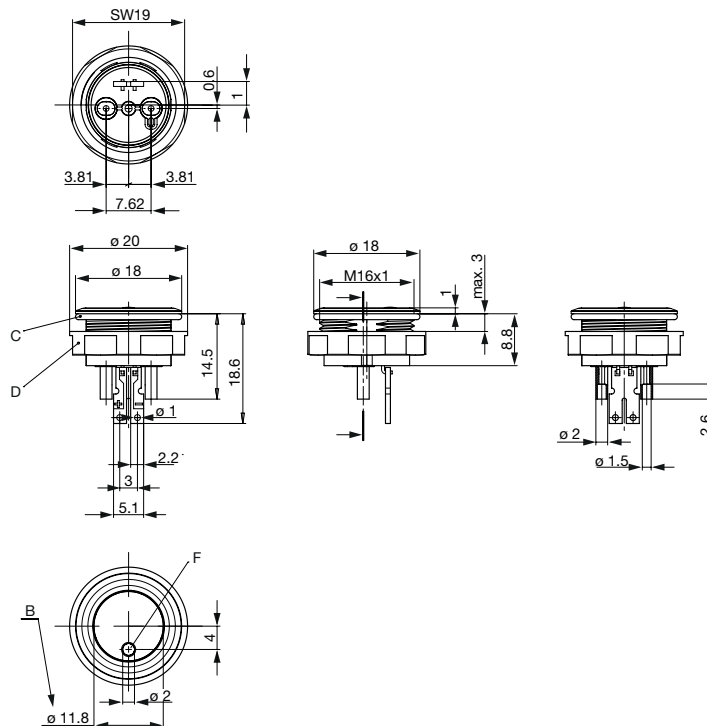
Compliances

The product complies with following Guide Lines

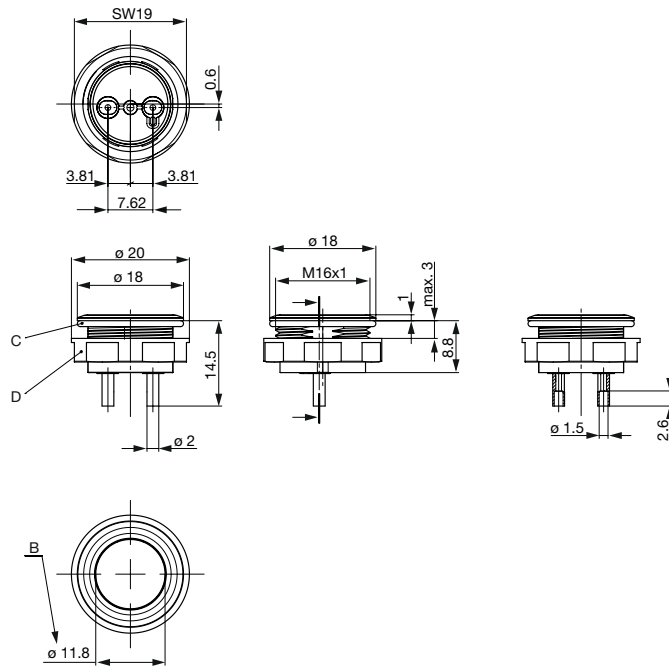
| Identification | Details | Initiator | Description |
|--|---------|-------------|---|
|  | RoHS | SCHURTER AG | Directive RoHS 2011/65/EU, Amendment (EU) 2015/863 |
|  | REACH | SCHURTER AG | On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction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

Dimension [mm]

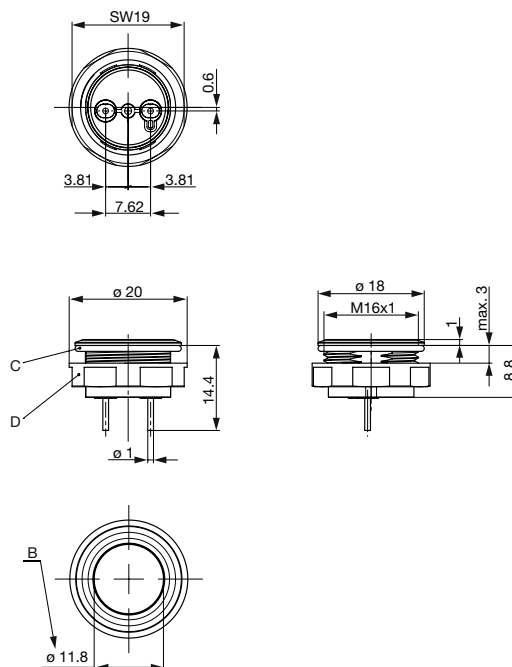
MCS 16 PI



MCS 16 with soldering aid



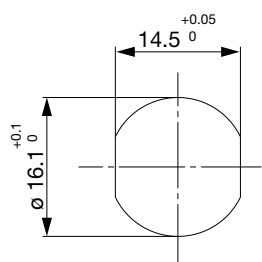
MCS 16 with pins



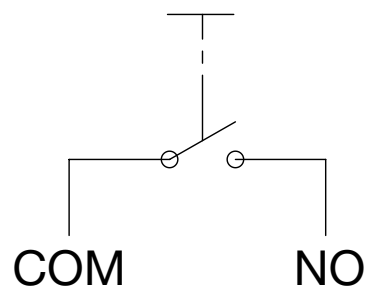
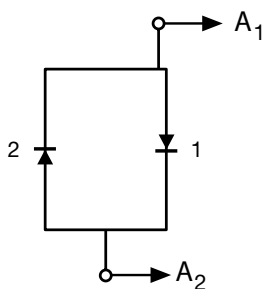
Legend

- B = Actuating Area
- C = Sealing
- D = Nut
- F = Point illumination

Dimension



Diagrams



- 1. Illumination color
- 2. Illumination color

A1 + and A2 - = illumination color 1
 A1 - and A2 + = illumination color 2

Point Illumination

| Operating Data | Forward Current max. | Forward Voltage at 10 mA | Forward Voltage max. |
|--|----------------------|--------------------------|----------------------|
| LED Colour 1: red/ Colour 2: green | 25 mA | 2.0 VDC | 2.5 VDC |
| Attention: Switches are delivered without series resistor. | | | |

Lettering Colour of Laser Lettering

| Material | Lettering Colour | |
|-----------------|------------------|----------------|
| Stainless Steel | 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 =Ⓜ |
| 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

| Terminal | Contact | Housing Material | Actuator Material | Varnish | Illumination | Color LED | Config. Code | Order Number |
|-------------------------|---------|------------------|-------------------|---------|--------------------|-------------|--------------|--------------|
| Pins | Au | Zinc Diecasting | Zinc Diecasting | - | non-illuminated | - | MCS 16 | 3-109-081 |
| Pins with Soldering Aid | Ag | Zinc Diecasting | Zinc Diecasting | - | Point Illumination | red / green | MCS 16 | 3-109-091 |
| Pins | Ag | Zinc Diecasting | Zinc Diecasting | - | non-illuminated | - | MCS 16 | 3-109-092 |
| Pins with Soldering Aid | Ag | Zinc Diecasting | Zinc Diecasting | - | non-illuminated | - | MCS 16 | 3-109-095 |
| Pins with Soldering Aid | Ag | Zinc Diecasting | Stainless Steel | - | non-illuminated | - | MCS 16 | 3-109-096 |
| Pins with Soldering Aid | Ag | Zinc Diecasting | Stainless Steel | - | Point Illumination | red / green | MCS 16 | 3-109-100 |

For Lettering versions see table "Order Index Lettering" to determine the symbol

Nut with gasket 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

20 in box with insert



- Actuating elements in ESD safe packaging
- Screw nuts and sealing O-ring in a bag (enclosed in the box)

Accessories

Description



Connecting Terminal MCS
Connecting Terminal

Mouser Electronics

Authorized Distributor

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

Schurter:

[3-109-095](#) [3-109-096](#) [3-109-100](#) [3-109-081](#) [3-109-091](#) [3-109-092](#)