

Momentary action switch double pole



RI homogeneous blue



Point Illumination  
green



non-illuminated  
grey

See below:

[Approvals and Compliances](#)

#### Description

- Available in version Standard, lettered, with Point Illumination or Ring Illumination
- Assembly method: clip micro-switch into the saddle, secure switch using mounting nut
- Equipped with flat-pin plugs to permit fast connection

#### Characteristics

- Housing and actuating area material: high-quality stainless steel for use in harsh environments (see technical data)
- Variety of design options regarding size, colour, illumination, connection or lettering
- Switching voltage from 30 VDC to 250 VAC, switching current from 0.1 A to 10 A
- double pole version with two switching contact sets, can be wired as NO, NC or as change-over
- IP-Protection: IP67 from front side to contact area, Micro-Switch is available in versions IP40 or IP67

#### References

Alternative: switch with latching function: [MSM LA 19](#)

Alternative: switch with backlighted illumination: [MSM CS 19](#); [MSM CS 22](#)

Alternative: Other diameter

Alternative: Standard version [MSM DP 22](#); [MSM DP 30](#); [MSM 16](#); [MSM 30](#)

#### Weblinks

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

**Technical Data****Electrical Data**

|                                 |                                                                                                                                                         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching Function              | momentary                                                                                                                                               |
| Number of Poles                 | DPDT                                                                                                                                                    |
| Supply Voltage                  | 24 VDC Ring Illumination , LED operating data are listed in separate table<br>5 VDC and 12 VDC RI variants (except for RGB) on request (MOQ 500 pieces) |
| Impulse Withstand Voltage (ESD) | 4 kV MSM ST / MSM LE                                                                                                                                    |

**Micro Switch 5 A / 125 VAC or 3 A / 250 VAC, IP40**

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Contact Material         | Ag                                                 |
| Switching Voltage        | max. 125 / 250 VAC                                 |
| Switching Current        | max. 5 / 3 A                                       |
| Rated Switching Capacity | 750 W                                              |
| Lifetime                 | 0.2 million actuations at Rated Switching Capacity |
| Contact Resistance       | < 30 mΩ                                            |
| Insulation Resistance    | > 100 MΩ                                           |
| Duration of Bounce       | < 5 ms                                             |

**Micro Switch 0,1 A / 30 VDC, IP40**

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Contact Material         | Au                                                 |
| Switching Voltage        | max. 30 VDC                                        |
| Switching Current        | max. 0.1 A                                         |
| Rated Switching Capacity | 3 W                                                |
| Lifetime                 | 0.2 million actuations at Rated Switching Capacity |
| Contact Resistance       | < 50 mΩ                                            |
| Insulation Resistance    | > 100 MΩ                                           |
| Duration of Bounce       | < 5 ms                                             |

**Micro Switch for Electrical Rating 10 A / 250 VAC (Protection Class IP40)**

|                          |                                                    |
|--------------------------|----------------------------------------------------|
| Contact Material         | Ag                                                 |
| Switching Voltage        | max. 250 VAC                                       |
| Switching Current        | max. 10 A                                          |
| Rated Switching Capacity | 2500 W                                             |
| Lifetime                 | 0.2 million actuations at Rated Switching Capacity |
| Contact Resistance       | < 30 mΩ                                            |
| Insulation Resistance    | > 100 MΩ                                           |
| Duration of Bounce       | < 5 ms                                             |

**Micro Switch 6 A / 250 VAC, IP67**

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Switching Voltage        | max. 250 VAC                                        |
| Switching Current        | max. 5                                              |
| Rated Switching Capacity | 1250 W                                              |
| Lifetime                 | 0.05 million actuations at Rated Switching Capacity |

**Micro Switch 0,1 A / 250 VAC, IP67 - on request**

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Switching Voltage        | max. 250 VAC                                        |
| Switching Current        | max. 0.1                                            |
| Rated Switching Capacity | 25 W                                                |
| Lifetime                 | 0.05 million actuations at Rated Switching Capacity |

**Micro Switch 10 A / 250 VAC, IP67 - on request**

|                          |                                                     |
|--------------------------|-----------------------------------------------------|
| Switching Voltage        | max. 250 VAC                                        |
| Switching Current        | max. 10 A                                           |
| Rated Switching Capacity | 2500 W                                              |
| Lifetime                 | 0.01 million actuations at Rated Switching Capacity |

**Mechanical Data**

|                                           |                        |
|-------------------------------------------|------------------------|
| Actuating Force                           | 5.0 N                  |
| Actuating Travel                          | 1.0 mm                 |
| Lifetime                                  | 1.5 million actuations |
| 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                  | -25 to 85 °C                      |
| Storage Temperature                    | -25 to 85 °C                      |
| Protection Class                       | IP67                              |
| Salt Spray Test (acc. to DIN 50021-SS) | 24 h / 48 h / 96 h Residence Time |

**Material**

|                                        |                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------|
| Housings                               | Stainless Steel                                                                   |
| Actuator                               | Stainless Steel                                                                   |
| Light Conductor (Point Illumination)   | PC                                                                                |
| Illuminated Ring (Ring Illumination)   | PA for dotted single color variants<br>PMMA for homogeneous single color variants |
| Seal Ring                              | NBR70                                                                             |
| Switcher Collet                        | PA                                                                                |
| Intermediate Connector non-illuminated | PA                                                                                |
| Intermediate Connector illuminated     | PA                                                                                |
| Switcher Adapter                       | 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.

## 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. |

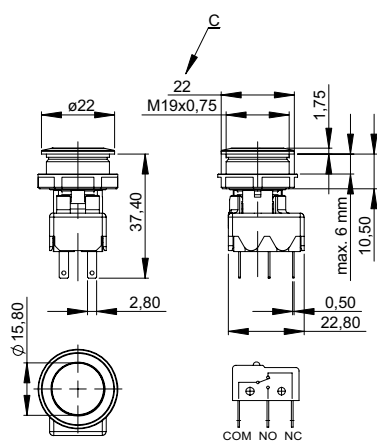
## Compliances

The product complies with following Guide Lines

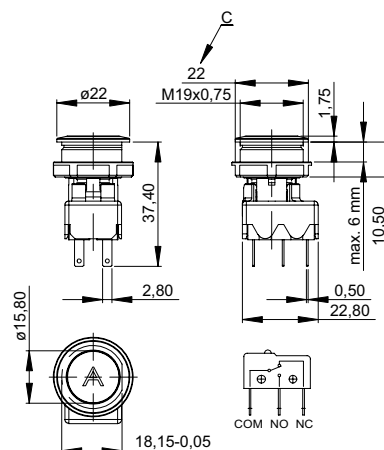
| Identification                                                                    | Details | Initiator   | Description                                                                                                                                                             |
|-----------------------------------------------------------------------------------|---------|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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]

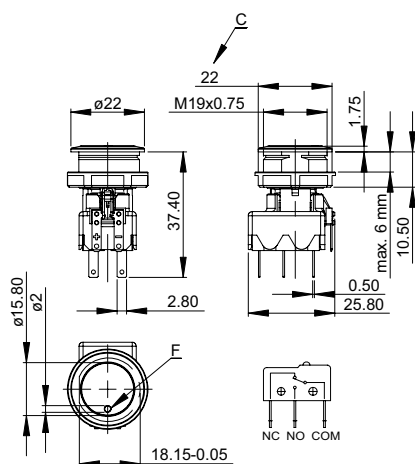
MSM 19 DP ST



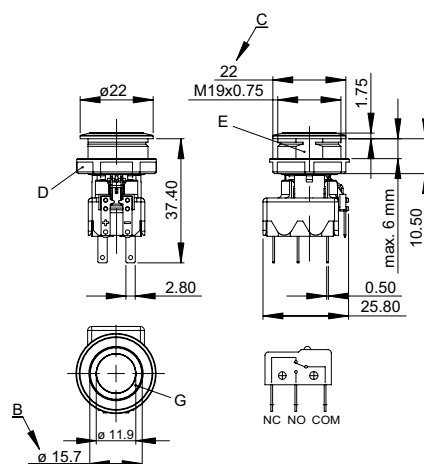
MSM 19 DP LE



MSM 19 DP PI

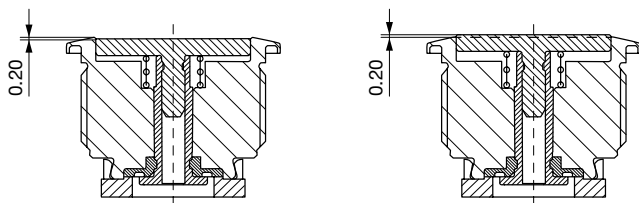


MSM 19 DP RI



**Legend**

B = Actuating Area  
C = Sealing  
D = Nut  
E = Anti-rotation protection  
F = Point illumination  
G = Illumination ring

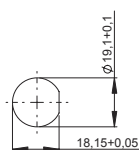
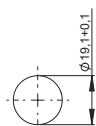
**Tolerance Range****Actuator Tolerance Range**

The mounting tolerance range of the actuator varies from 0.2 mm projection length and 0.2 mm short length to the housing edge. The slanting position of the actuator can range within this tolerance.

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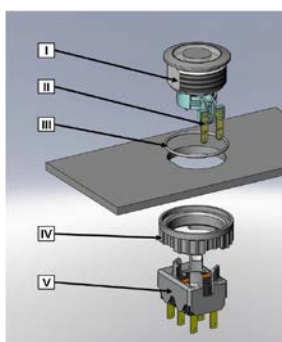
**Dimension**

MSM 19 DP ST / MSM 19 DP RI

MSM 19 DP LE / MSM 19 DP PI /  
MSM 19 DP RI optional

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:

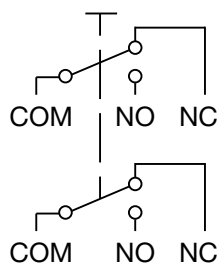
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

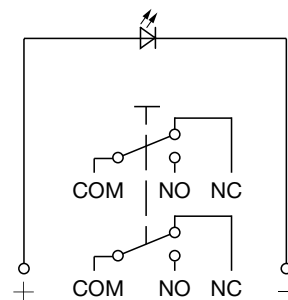
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

## Diagrams

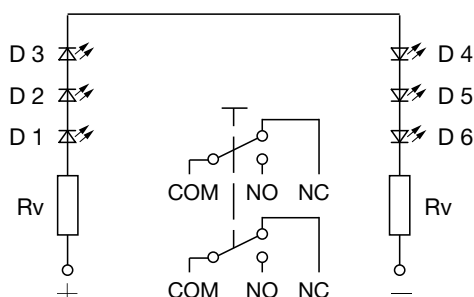
MSM DP ST / MSM DP LE



MSM DP PI



MSM DP RI



## Point Illumination

| Operating Data  | Forward Current max. | Forward Voltage at 10 mA | Forward Voltage at 8 mA | Forward Voltage at 20 mA | Forward Voltage max. |
|-----------------|----------------------|--------------------------|-------------------------|--------------------------|----------------------|
| LED red         | 30 mA                | 1.9 VDC                  |                         |                          | 3.0 VDC              |
| LED green       | 30 mA                | 2.1 VDC                  |                         |                          | 3.0 VDC              |
| LED yellow      | 30 mA                | 2.1 VDC                  |                         |                          | 3.0 VDC              |
| LED blue        | 20 mA                |                          | 3.7 VDC                 |                          | 4.5 VDC              |
| LED white       | 30 mA                |                          |                         | 3.6 VDC                  | 4.0 VDC              |
| LED red / green | 25 mA                |                          |                         | 2.0 VDC / 2.2 VDC        |                      |

Attention: Switches are delivered without series resistor.

## 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     |
|-----------------|----------------------|
| 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   |             |

All Variants

| IP Switching Unit | Switching Current | Switching Voltage | Illumination, LED             | Housing Material, Torsion Protection | Actuator Material, Tor-sion Protection | Config. Code       | Order Number      |   |
|-------------------|-------------------|-------------------|-------------------------------|--------------------------------------|----------------------------------------|--------------------|-------------------|---|
|                   | [A]               | [VAC/VDC]         |                               |                                      |                                        |                    |                   |   |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | non-illuminated               | Stainless Steel ,no                  | Stainless Steel ,no                    | MSM 19 DP Pcs      | 1241.6921.1120000 | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | non-illuminated               | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP LE       | 1241.6922.1120000 |   |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | Point Illumination, red       | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP PI red   | 1241.6923.1121000 |   |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | Point Illumination, green     | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP PI green | 1241.6923.1122000 | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | Point Illumination, blue      | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP PI blue  | 1241.6923.1124000 |   |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI dotted, red, 24 VDC        | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI red   | 1241.6924.1121000 |   |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI dotted, green, 24 VDC      | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI green | 1241.6924.1122000 | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI dotted, blue, 24 VDC       | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI blue  | 1241.6924.1124000 | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI homogeneous, red, 24 VDC   | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI red   | 3-108-951         | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI homogeneous, green, 24 VDC | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI green | 3-108-962         | ■ |
| IP40              | 5 / 3 A           | 125 / 250 VAC     | RI homogeneous, blue, 24 VDC  | Stainless Steel ,yes                 | Stainless Steel ,yes                   | MSM 19 DP RI blue  | 3-108-963         | ■ |

IP-Protection: IP67 from front side to contact area, Micro-Switch is available in versions IP40 or IP67, see Technical Data Micro-Switch

Variants with 6 A micro switch have IP67

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

5 VDC and 12 VDC RI variants (except for RGB) on request (MOQ 500 pieces)

Customer-specific versions available on request.

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

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 or packed in air cushion bags



- Actuating elements in ESD safe packaging
- Screw nuts and sealing rings in a bag (enclosed in the box)
- Micro switches in a bag (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 «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- Конкурентоспособные цены и скидки постоянным клиентам.
- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
- Приемлемые сроки поставки, возможна ускоренная поставка.
- Доставку товара в любую точку России и стран СНГ.
- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
- Тестирование поставляемой продукции.
- Поставку компонентов, требующих военную и космическую приемку.
- Входной контроль качества.
- Наличие сертификата ISO.

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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