

Momentary action switch double pole



RI homogeneous green



RI dotted red



### 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

See below:

### Approvals and Compliances

### 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: IP 67 from front side to contact area, Micro-Switch is available in versions IP 40 or IP 67

### References

- Alternative: Standard version [MSM DP 30](#); [MSM 16](#); [MSM 30](#)
- Alternative: switch with latching function: [MSM LA 19](#)
- Alternative: switch with backlighted illumination: [MSM CS 19](#); [MSM CS 22](#)
- Alternative: Other diameter [MSM DP 19](#)

### Weblinks

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

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

Switching Function	N.O., N.C., N.O./N.C.
Number of Poles	2-pole
Supply Voltage	24 VDC * Ring Illumination , Point Illumination without series resistor , LED operating data are listed in separate table
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

\* 5 V or 12 V variants on request

**Mechanical Data**

Actuating Force	5.0 N
Actuating Travel	1.0 mm
Lifetime	1.5 million actuations
Shock Protection	IK 07
Tightening Torque Plastic Nut	max. 3.5 Nm
Tightening Torque Stainless Steel Nut	max. 16 Nm

**Climatical Data**

Operating Temperature	-25 to +85 °C
Storage Temperature	-25 to +85 °C
Protection Class	IP 67
IP Switching Unit	IP 40
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 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](#)**Approvals**

Approval Reference Type:

Approval Logo	Certification Body	Description
VDE		Low Voltage Directive 2014/35/EU Low Voltage Directive 2014/35/EU
VDE		VDE / ENEC Certificate Number (Omron): 40008425, 129246, 125256
UL	UL	UL / CSA File Number (Omron): E41515
VDE		VDE / ENEC Certificate Number (Marquardt): 097550
UL	UL	UL / CSA File Number (Marquardt): E41791
KEMA EUR	KEMA	KEMA / ENEC File Number (Cherry): 2089323.01
UL	UL	UL / CSA File Number (Cherry): E23301

### Product standards

Product standards that are referenced

Organization	Design	Standard	Description
DIN	Designed according to	DIN EN 61058-1	Switches for appliances. Part 1. General requirements
UL	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
IEC	Designed for applications acc.	IEC/UL 60950	IEC 60950-1 includes the basic requirements for the safety of information technology equipment.

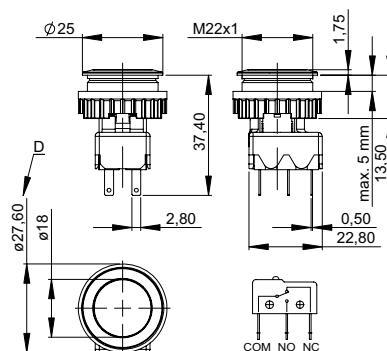
### Compliances

The product complies with following Guide Lines

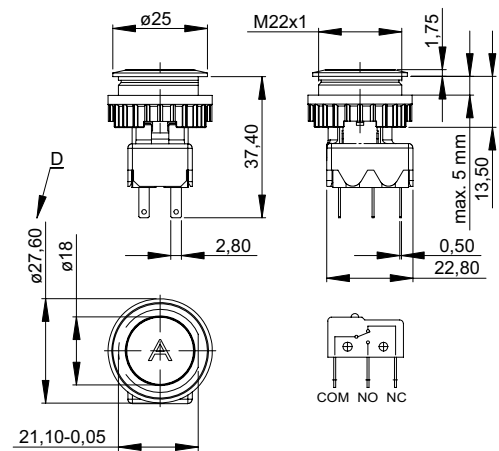
Identification	Details	Initiator	Description
RoHS Compliant	RoHS	SCHURTER AG	EU Directive RoHS 2011/65/EU
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into force.

### Dimension [mm]

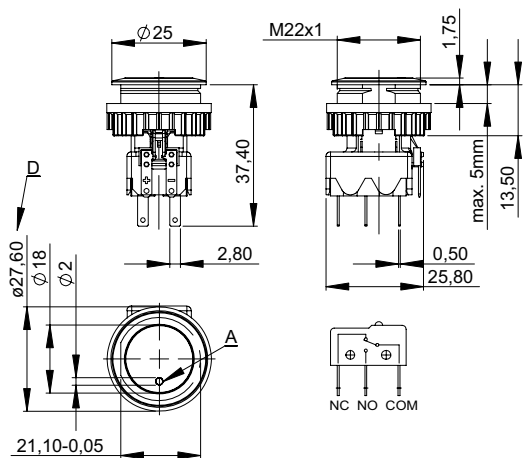
MSM 22 DP ST



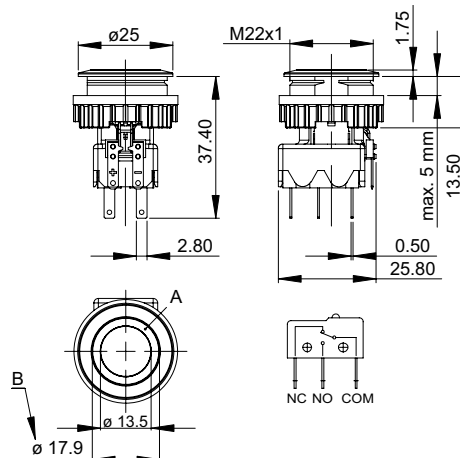
MSM 22 DP LE



## MSM 22 DP PI



## MSM 22 DP RI

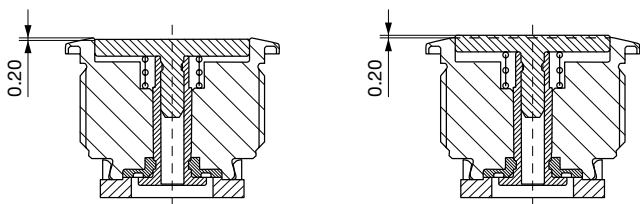


### Legend

- A = Illumination Area
- B = Actuating Area
- C = Width Across Flats
- D = Nut

### Tolerance Range

#### Actuator Tolerance Range



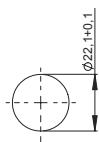
The mounting tolerance range of the actuator varies from 0.2 mm projection length and 0.2 mm short length to the housing edge. The slanting position of the actuator can range within this tolerance.

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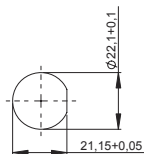
### Dimension

MSM 22 DP ST / MSM 22 DP RI

MSM 22 DP LE / MSM 22 DP PI /  
MSM 22 DP RI optional

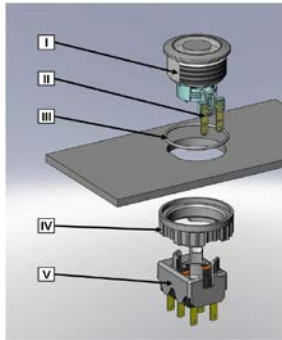


Drilling diagram



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:

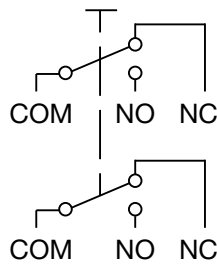
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

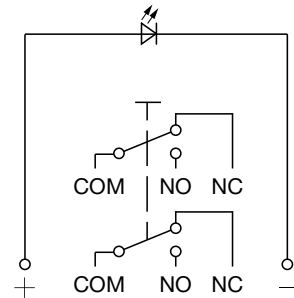
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

**Diagrams**

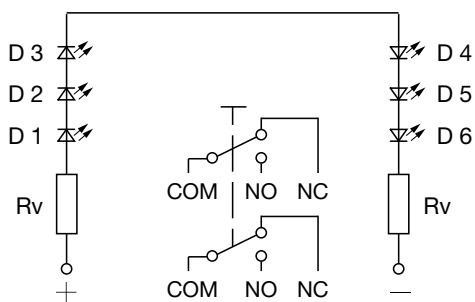
MSM DP ST / MSM DP LE



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 = <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**

IP Switching Unit	Switching Current [A]	Switching Voltage [VAC/ VDC]	Illumination, LED	Housing Material, Torsion Protection	Actuator Material, Torsion Protection	Config. Code	Order Number
IP 40	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel ,no	MSM 22 DP	1241.6931.1120000
IP 40	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP LE	1241.6932.1120000
IP 40	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP PI red	1241.6933.1121000
IP 40	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP PI green	1241.6933.1122000
IP 40	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP PI blue	1241.6933.1124000
IP 40	5 / 3 A	125 / 250 VAC	Ring dotted, red, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI red	1241.6934.1121000
IP 40	5 / 3 A	125 / 250 VAC	Ring dotted, green, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI green	1241.6934.1122000
IP 40	5 / 3 A	125 / 250 VAC	Ring dotted, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI blue	1241.6934.1124000
IP 40	5 / 3 A	125 / 250 VAC	Ring homogeneous, red, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI red	3-108-974
IP 40	5 / 3 A	125 / 250 VAC	Ring homogeneous, green, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI green	3-108-975
IP 40	5 / 3 A	125 / 250 VAC	Ring homogeneous, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel ,yes	MSM 22 DP RI blue	3-108-976

IP-Protection: IP 67 from front side to contact area, Micro-Switch is available in versions IP 40 or IP 67, see Technical Data Micro-Switch

Variants with 6 A micro switch have IP67

The MOQ for standard laser lettering on standard variants is 10 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



#### Installation Wrench MSM 22

Installation wrench