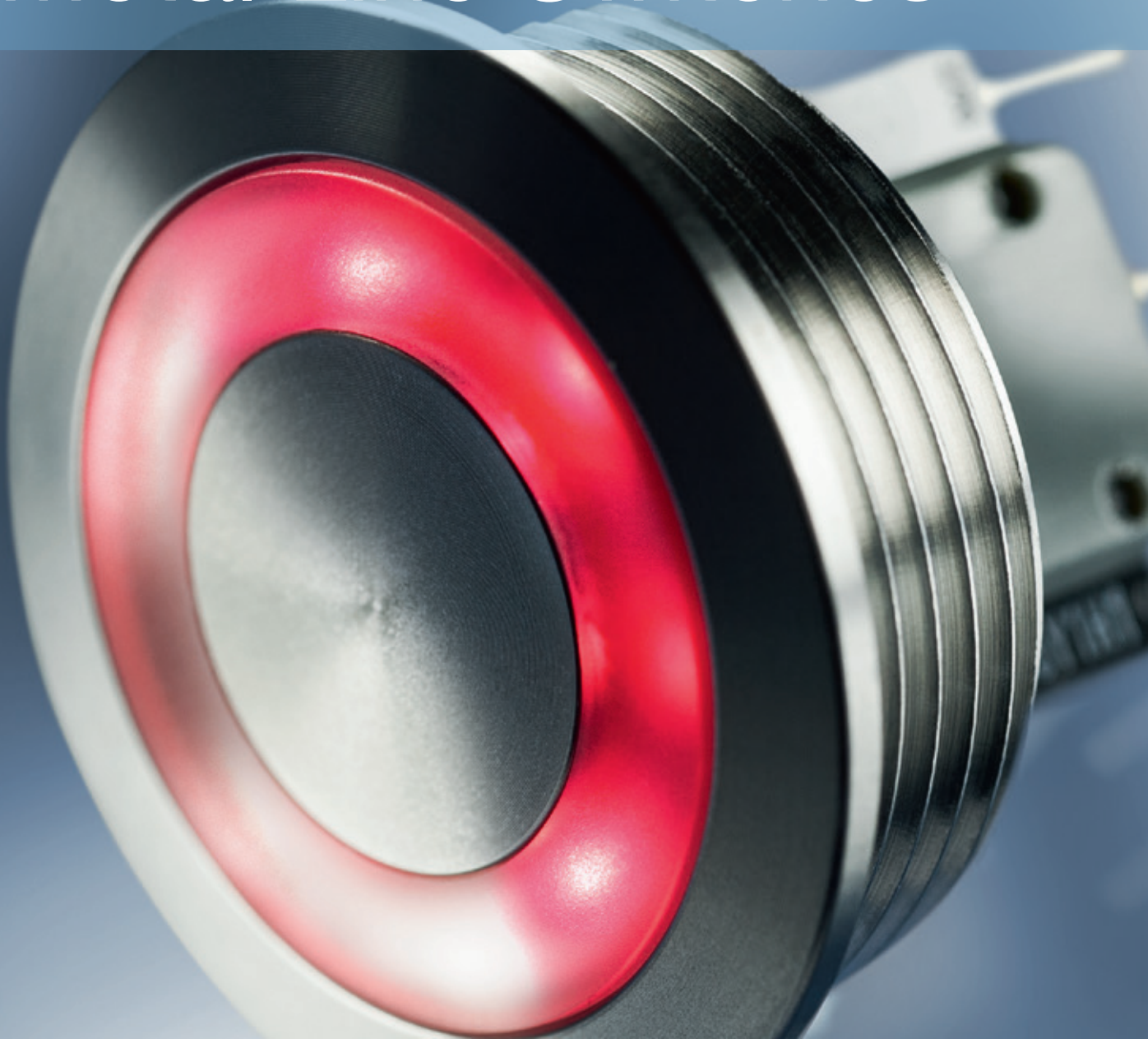


Product Flyer Metal Line Switches



Metal Switch Medium Stroke, Switching Voltage up to 250 VAC



MSM 22 RI blue



MSM 16 ST



MSM 19 RI white



MSM 30 RI red



Description

- Momentary action switch available in version: Standard (ST), with Lettering (LE), from diameter 19 mm with Point Illumination (PI) and with Ring Illumination (RI)
- Assembly method: clip micro-switch into the saddle, secure switch using mounting nut
- Equipped with flat-pin plugs to permit fast connection

Standards

- DIN EN 61058-1
- UL 1054

Approvals

- Low Voltage Directive 2006/95/EC compliant; following certificate numbers apply to micro switch
- VDE / ENEC Certificate Number (Omron): 40008425, 129246, 125256
- UL / CSA File Number (Omron): E41515
- VDE / ENEC Certificate Number (Marquardt): 097550
- UL / CSA File Number (Marquardt): E41791
- KEMA / ENEC File Number (Cherry): 2089323.01
- UL / CSA File Number (Cherry): E23301

Characteristics

- Housing and actuator material: high-quality stainless steel
- 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
- optional with point or ring illumination
- IP-Protection: IP 67 from front side to contact area, Micro-Switch is available in versions IP 40 or IP 67, moving actuator is rated IP 40 to frontside
- for use in harsh environments

References

- Alternative: double-pole switch:
- Alternative: switch with latching function:
- Alternative: switch with backlighted illumination:

Weblinks

- html-datasheet: <http://www.schurter.ch/de/Komponenten/Schalter/Metal-Line-Taster/MSM-22>
- General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>
- CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)
- RoHS: <http://www.schurter.com/Company/Environment/RoHS>
- CHINA-RoHS: <http://www.schurter.com/china-rohs>
- e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>
- CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>
- Product News: <http://www.schurter.ch/en/New-Products>
- Detailed request for product: <http://www.schurter.com/en/Contacts/Contact-Form?type=MSM>

Technical Data

Electrical Data	
Switching Function	N.O., N.C., N.O./N.C.
Number of Poles	1 pole
Supply Voltage	24 / 12 / 5 VDC Ring Illumination, Point Illumination without series resistor, LED operating data are listed in separate table
Surge Strength	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	0.05 million actuations at Rated Switching Capacity
Contact Resistance	< 30 mΩ
Insulation Resistance	> 100 MΩ
Duration of Bounce	< 5 ms

Micro Switch 5 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	4.5 N
Actuating Travel	1.0 mm, for mounting diameter 16, 19, 22 mm 1.2 mm for mounting diameter 30 mm
Lifetime	1.5 million actuations
Shock Protection	IK 07 for mounting diameter 19, 22, 30 mm, IK 06 for mounting diameter 16 mm
Tightening Torque Plastic Nut	max. 2 Nm for thread M16, 4.5 Nm for M19, 3.5 Nm for M22, 8 Nm for M30
Tightening Torque Stainless Steel Nut	max. 10 Nm for thread M16, 12 Nm for M19, 16 Nm for M22, 50 Nm for M30

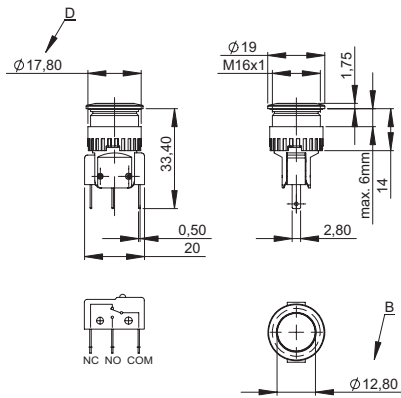
Climatical Data

Operating Temperature	-25 to +85 °C
Storage Temperature	-25 to +85 °C
IP-Protection	IP 67 Front Side Contact Area, IP 40 Front Side mechanical, IP 40 / IP 67 Rear Side Contact Area optional
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time

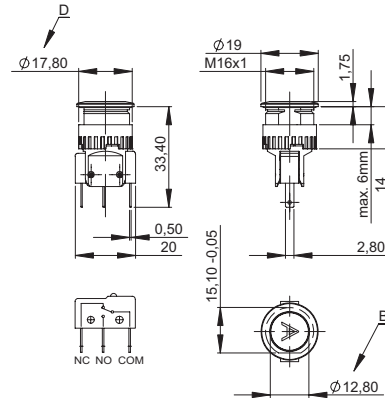
Material

Housing	Stainless Steel
Actuator	Stainless Steel
Light Conductor (Point Illumination)	PC
Illuminated Ring (Ring Illumination)	PA
Gasket	NBR70
Switcher Collet	PA

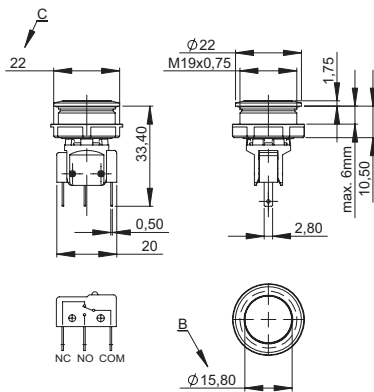
Dimension
MSM 16 ST



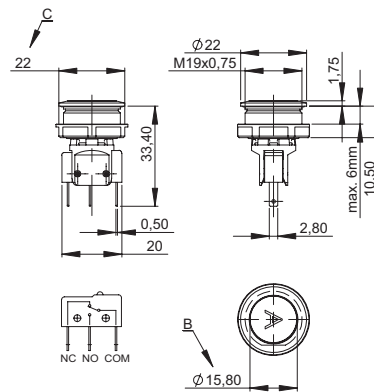
MSM 16 LE



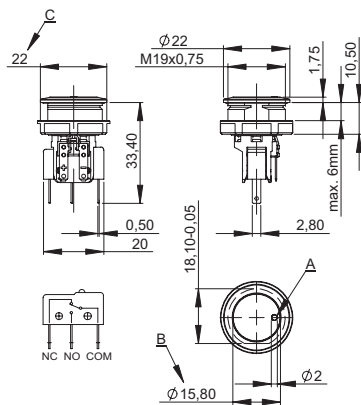
MSM 19 ST



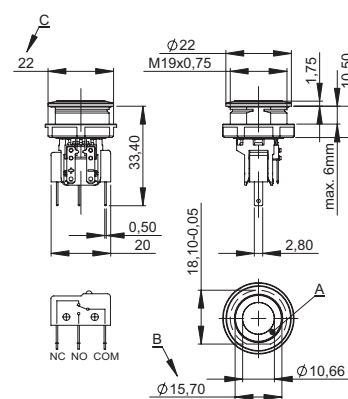
MSM 19 LE



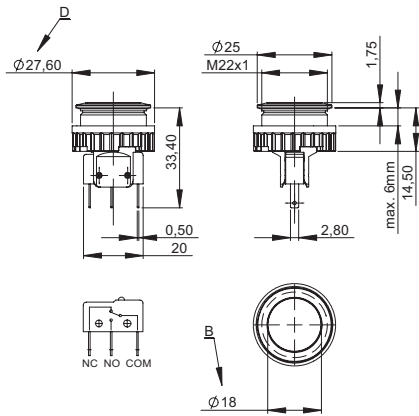
MSM 19 PI



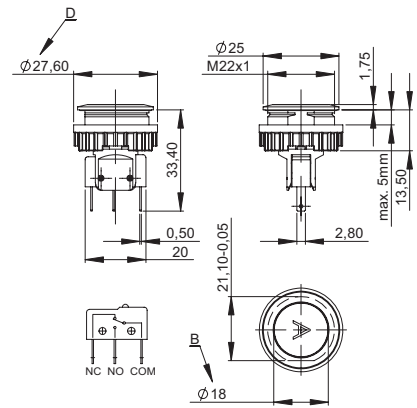
MSM 19 RI



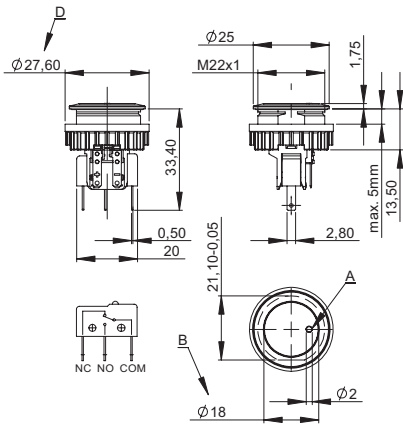
MSM 22 ST



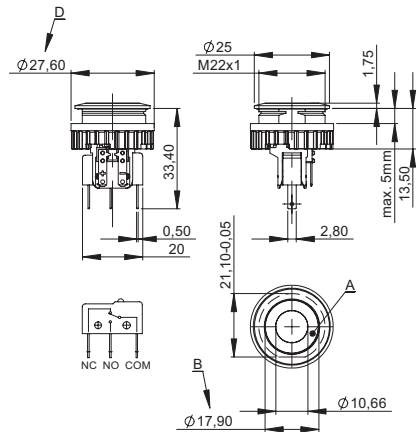
MSM 22 LE



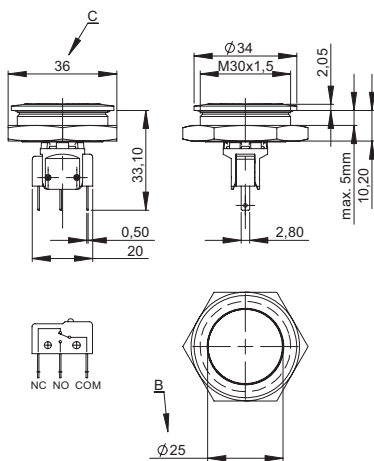
MSM 22 PI



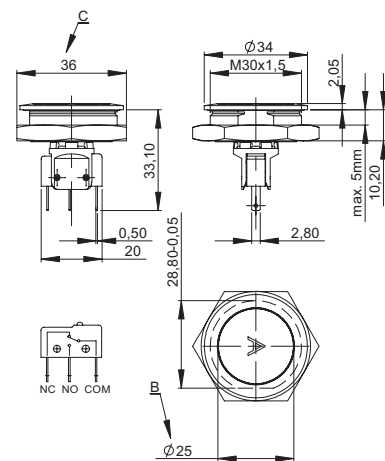
MSM 22 RI



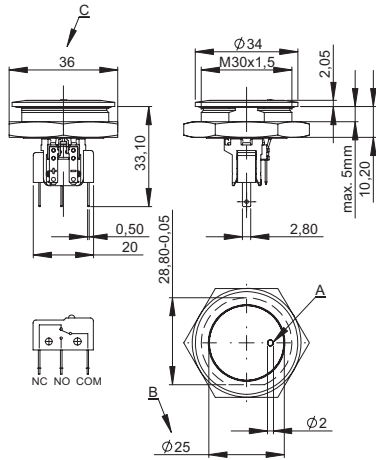
MSM 30 ST



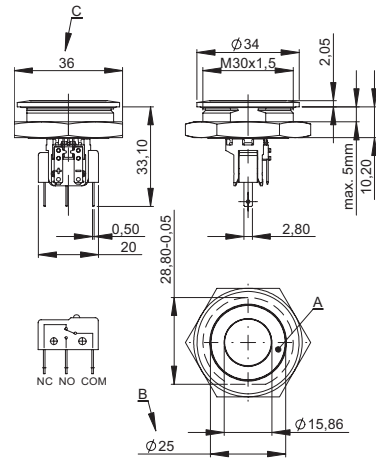
MSM 30 LE



MSM 30 PI



MSM 30 RI

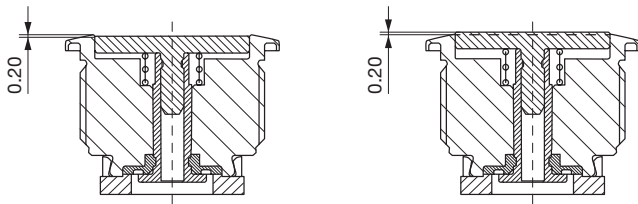


Legend

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

Tolerance Range

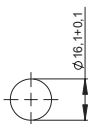
Actuator Tolerance Range



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.

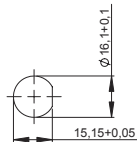
Dimension

MSM 16 ST



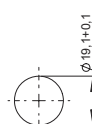
Drilling diagram

MSM 16 LE



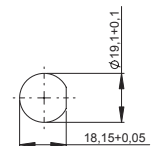
Drilling diagram

MSM 19 ST / MSM 19 RI



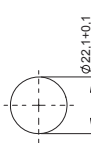
Drilling diagram

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



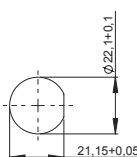
Drilling diagram

MSM 22 ST / MSM 22 RI



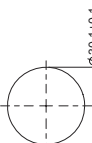
Drilling diagram

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



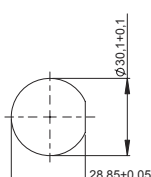
Drilling diagram

MSM 30 ST / MSM 30 RI



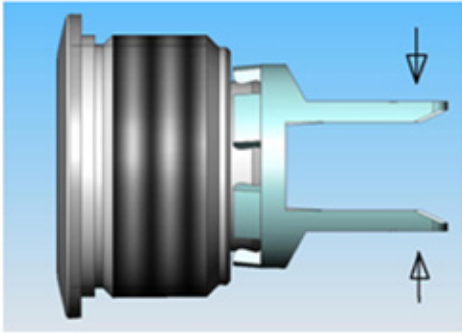
Drilling diagram

MSM 30 LE / MSM 30 PI / MSM 30 RI optional

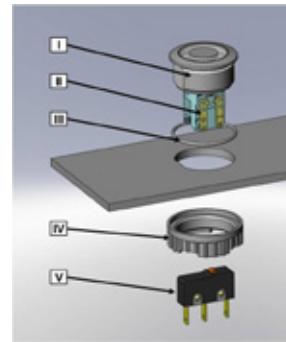


Drilling diagram

Assembly Instructions



During assembly, the protruding bars of the holder should not be pressed together.



- I Housing
- II Flat Pin Terminal (Illumination)
- III Gasket
- IV Nut (Nut type see Dimensions)
- V Module Switching Contact

Installation Instruction:

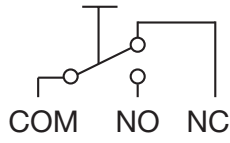
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the micro switch holder of the actuator housing.

Installation information:

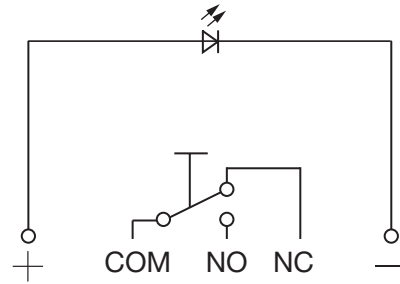
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

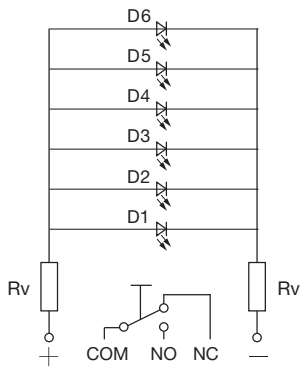
MSM ST / MSM LE



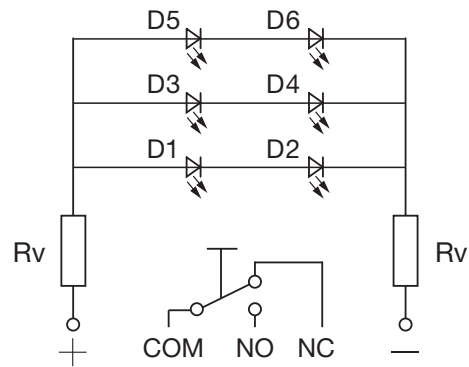
MSM PI



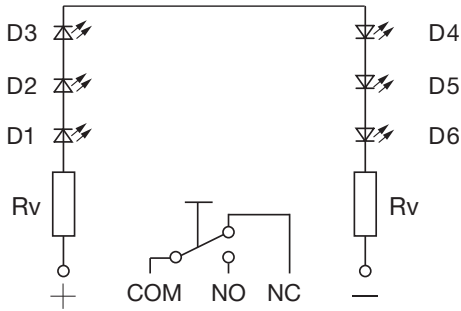
MSM RI / 5 V



MSM RI / 12 V



MSM RI / 24 V



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

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

For further Lettering details see also weblink:

[General Product Information](#)

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

All Variants

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
16	100 mA	30 VDC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 16 ST	1241.6611.1110000
16	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 16 ST	1241.6611.1120000
16	10 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 16 ST	1241.6611.1130000
16	100 mA	30 VDC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 16 LE	1241.6612.1110000
16	100 mA	30 VDC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 16 LE	1241.6612.1110074
16	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 16 LE	1241.6612.1120000
16	10 A	250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 16 LE	1241.6612.1130000
19	100 mA	30 VDC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 19 ST	1241.6621.1110000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 19 ST	1241.6621.1120000
19	10 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 19 ST	1241.6621.1130000
19	5 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 19 ST	1241.6621.1180000
19	100 mA	30 VDC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 19 LE	1241.6622.1110000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 19 LE	1241.6622.1120000
19	10 A	250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 19 LE	1241.6622.1130000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 19 LE	1241.6622.3120000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 19 LE	1241.6622.3120057
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 19 LE	1241.6622.3120062
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 19 LE	1241.6622.3120066

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 19 LE	1241.6622.5120000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 19 LE	1241.6622.5120061
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 19 LE	1241.6622.5120065
19	5 / 3 A	125 / 250 VAC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 19 LE	1241.6622.5120072
19	100 mA	30 VDC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 19 PI red	1241.6623.1111000
19	100 mA	30 VDC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 19 PI green	1241.6623.1112000
19	100 mA	30 VDC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 19 PI blue	1241.6623.1114000
19	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 19 PI red	1241.6623.1121000
19	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 19 PI green	1241.6623.1122000
19	5 / 3 A	125 / 250 VAC	Point Illumination, yellow	Stainless Steel ,yes	Stainless Steel	MSM 19 PI yellow	1241.6623.1123000
19	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 19 PI blue	1241.6623.1124000
19	5 / 3 A	125 / 250 VAC	Point Illumination, red / green	Stainless Steel ,yes	Stainless Steel	MSM 19 PI red / green	1241.6623.1126000
19	10 A	250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 19 PI red	1241.6623.1131000
19	10 A	250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 19 PI green	1241.6623.1132000
19	10 A	250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 19 PI blue	1241.6623.1134000
19	100 mA	30 VDC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI red	1241.6624.1111000
19	100 mA	30 VDC	Ring Illumination, red, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI red	1241.6624.1111000B
19	100 mA	30 VDC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI green	1241.6624.1112000
19	100 mA	30 VDC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI yellow	1241.6624.1113000
19	100 mA	30 VDC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1114000
19	100 mA	30 VDC	Ring Illumination, blue, 12 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1114000E
19	100 mA	30 VDC	Ring Illumination, blue, 12 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1114074E
19	100 mA	30 VDC	Ring Illumination, white, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI white	1241.6624.1115000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI red	1241.6624.1121000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI green	1241.6624.1122000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI yellow	1241.6624.1123000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1124000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, white, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI white	1241.6624.1125000
19	10 A	250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI red	1241.6624.1131000
19	10 A	250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI green	1241.6624.1132000
19	10 A	250 VAC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI yellow	1241.6624.1133000
19	10 A	250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1134000
19	5 A	250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI red	1241.6624.1181000
19	5 A	250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI green	1241.6624.1182000
19	5 A	250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 RI blue	1241.6624.1184000

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
22	100 mA	30 VDC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 22 ST	1241.6631.1110000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 22 ST	1241.6631.1120000
22	10 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 22 ST	1241.6631.1130000
22	5 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 22 ST	1241.6631.1180000
22	100 mA	30 VDC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 22 LE	1241.6632.1110000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 22 LE	1241.6632.1120000
22	10 A	250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 22 LE	1241.6632.1130000
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 22 LE	1241.6632.3120000
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 22 LE	1241.6632.3120057
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 22 LE	1241.6632.3120062
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 22 LE	1241.6632.3120066
22	10 A	250 VAC	non-illuminated	Alu red ,yes	Stainless Steel	MSM 22 LE	1241.6632.3130062
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 22 LE	1241.6632.5120000
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 22 LE	1241.6632.5120061
22	5 / 3 A	125 / 250 VDC	non-illuminated	Alu green ,yes	Stainless Steel	MSM 22 LE	1241.6632.5120065
22	100 mA	30 VDC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 22 PI red	1241.6633.1111000
22	100 mA	30 VDC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 22 PI green	1241.6633.1112000
22	100 mA	30 VDC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 22 PI blue	1241.6633.1114000
22	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 22 PI red	1241.6633.1121000
22	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 22 PI green	1241.6633.1122000
22	5 / 3 A	125 / 250 VAC	Point Illumination, yellow	Stainless Steel ,yes	Stainless Steel	MSM 22 PI yellow	1241.6633.1123000
22	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 22 PI blue	1241.6633.1124000
22	5 / 3 A	125 / 250 VAC	Point Illumination, white	Stainless Steel ,yes	Stainless Steel	MSM 22 PI white	1241.6633.1125000
22	5 / 3 A	125 / 250 VAC	Point Illumination, red / green	Stainless Steel ,yes	Stainless Steel	MSM 22 PI red / green	1241.6633.1126000
22	10 A	250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 22 PI red	1241.6633.1131000
22	10 A	250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 22 PI green	1241.6633.1132000
22	10 A	250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 22 PI blue	1241.6633.1134000
22	100 mA	30 VDC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1111000
22	100 mA	30 VDC	Ring Illumination, red, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1111000B
22	100 mA	30 VDC	Ring Illumination, red, 12 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1111000E
22	100 mA	30 VDC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1112000
22	100 mA	30 VDC	Ring Illumination, green, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1112000B
22	100 mA	30 VDC	Ring Illumination, green, 12 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1112000E
22	100 mA	30 VDC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI yellow	1241.6634.1113000
22	100 mA	30 VDC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1114000
22	100 mA	30 VDC	Ring Illumination, blue, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1114000B
22	100 mA	30 VDC	Ring Illumination, blue, 12 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1114000E
22	100 mA	30 VDC	Ring Illumination, white, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI white	1241.6634.1115000B

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/VDC]					
22	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1121000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1122000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI yellow	1241.6634.1123000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1124000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 5 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1124000B
22	5 / 3 A	125 / 250 VAC	Ring Illumination, white, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI white	1241.6634.1125000
22	10 A	250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1131000
22	10 A	250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1132000
22	10 A	250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1134000
22	5 A	250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI red	1241.6634.1181000
22	5 A	250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI green	1241.6634.1182000
22	5 A	250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 RI blue	1241.6634.1184000
30	100 mA	30 VDC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 30 ST	1241.6661.1110000
30	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 30 ST	1241.6661.1120000
30	10 A	250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 30 ST	1241.6661.1130000
30	100 mA	30 VDC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 30 LE	1241.6662.1110000
30	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 30 LE	1241.6662.1120000
30	10 A	250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 30 LE	1241.6662.1130000
30	100 mA	30 VDC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 30 PI red	1241.6663.1111000
30	100 mA	30 VDC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 30 PI green	1241.6663.1112000
30	100 mA	30 VDC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 30 PI blue	1241.6663.1114000
30	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 30 PI red	1241.6663.1121000
30	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 30 PI green	1241.6663.1122000
30	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 30 PI blue	1241.6663.1124000
30	5 / 3 A	125 / 250 VAC	Point Illumination, white	Stainless Steel ,yes	Stainless Steel	MSM 30 PI white	1241.6663.1125000
30	10 A	250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 30 PI red	1241.6663.1131000
30	10 A	250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 30 PI green	1241.6663.1132000
30	10 A	250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 30 PI blue	1241.6663.1134000
30	5 / 3 A	125 / 250 VAC	Point Illumination, red	Alu red ,yes	Alu red	MSM 30 PI red	1241.6663.3121
30	100 mA	30 VDC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI red	1241.6664.1111000
30	100 mA	30 VDC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI green	1241.6664.1112000
30	100 mA	30 VDC	Ring Illumination, yellow, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI yellow	1241.6664.1113000
30	100 mA	30 VDC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI blue	1241.6664.1114000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI red	1241.6664.1121000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 RI green	1241.6664.1122000

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
30	5 / 3 A	125 / 250 VAC	Ring Illumination, yellow, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI yellow	1241.6664.1123000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI blue	1241.6664.1124000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 12 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI blue	1241.6664.1124000E
30	5 / 3 A	125 / 250 VAC	Ring Illumination, white, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI white	1241.6664.1125000
30	10 A	250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI red	1241.6664.1131000
30	10 A	250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI green	1241.6664.1132000
30	10 A	250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel .yes	Stainless Steel	MSM 30 RI blue	1241.6664.1134000

Legend:

Type: MSM

CS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

Alu red = red anodized aluminum housing, actuator stainless steel

1241.6622.3120062 -> 3 last numbers (062) see Order Index Lettering

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

Ring illuminated versions: supply voltage 24 VDC, 12 VDC (E), 5 VDC (B), (further 12 and 5 VDC versions on request)

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.

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)

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



MSM 19 LA LE RI blue



MSM 22 LA PI red



MSM LA 22 RI green



Description

- Switch available in version: Standard (ST), with Lettering (LE), with Point Illumination (PI), with Ring Illumination (RI)
- Assembly by mounting with nut and subsequent clipping of the switching element
- Equipped with flat-pin plugs to permit fast connection

Standards

- DIN EN 61058-1
- UL 1054

Approvals

- Low Voltage Directive 2006/95/EC Low Voltage Directive 2006/95/EC
- KEMA / ENEC File Number (Marquardt): 2106068.01
- UL / CSA File Number (Marquardt): E41791

Characteristics

- Housing and actuator material: high-quality stainless steel
- Variety of design options regarding size, colour, illumination, connection or lettering
- Switching voltage up to 125 VDC respectively 250 VAC, switching current up to 12 A
- optional with point or ring illumination
- 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

References

Alternative: Standard version

Alternative: double-pole switch:

Alternative: switch with backlighted illumination:

Weblinks

html-datasheet: <http://www.schurter.ch/en/Components/Switches/Metal-Line-Switches/MSM-LA-19>

General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>

CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)

RoHS: <http://www.schurter.com/Company/Environment/RoHS>

CHINA-RoHS: <http://www.schurter.com/china-rohs>

e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>

CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>

Product News: <http://www.schurter.ch/en/New-Products>

Detailed request for product: http://www.schurter.com/en/Contacts/Contact-Form?type=MSM_LA

Technical Data

Electrical Data

Switching Function	N.O.
Number of Poles	1 pole and 2 pole
Supply Voltage	24 VDC Ring Illumination, Point Illumination without series resistor, LED operating data are listed in a separate table
Surge Strength	4 kV MSM ST / MSM LE
Switching Voltage	max. 250 VAC 30 VDC (125 VDC at 0.5 A),
Switching Current	max. 12 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)
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
Tightening Torque Plastic Nut	4.5 Nm for thread M19, 3.5 Nm for M22
Tightening Torque Stainless Steel Nut	12 Nm for thread M19, 16 Nm for M22

Climatical Data

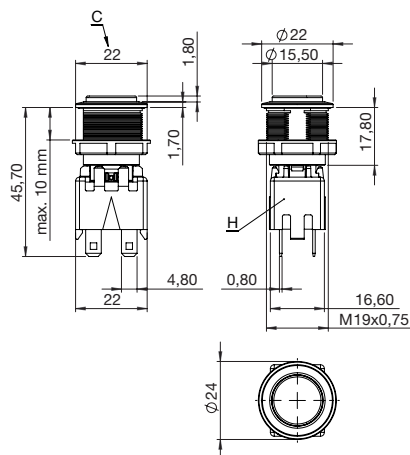
Operating Temperature	-20 to +85 °C
Storage Temperature	-20 to +85 °C
IP-Protection	IP 64 Front Side Contact Area, IP 40 Front Side mechanical, IP 00 Rear Side
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time

Material

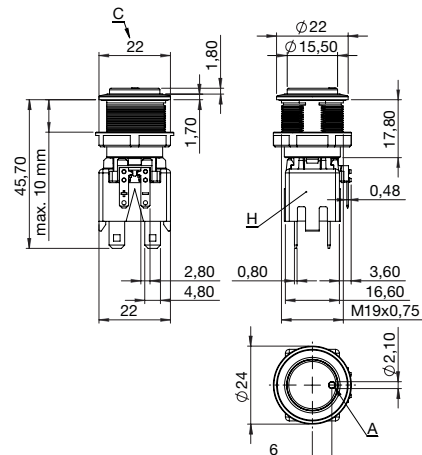
Housing	Stainless Steel
Actuator (disc, outside housing)	Stainless Steel
Illuminated Ring (die-casting, inside housing)	PC
Gasket	NBR70
Switcher Collet	PA66 (UL94-V0 related to $d \geq 1.6$ mm)
Intermediate Connector	PA66 (UL94-V0 related to $d \geq 1.6$ mm)
Contact Pin Adapter	PA66 (UL94-V0 related to $d \geq 1.6$ mm)

Dimension

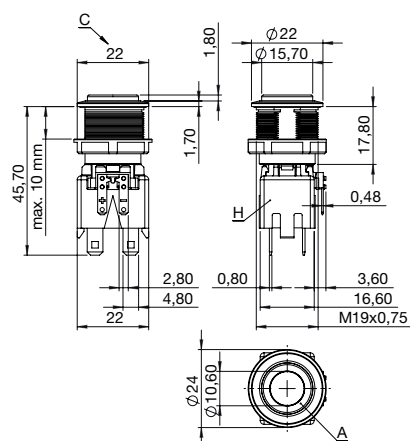
MSM 19 LA ST / LE double-pole



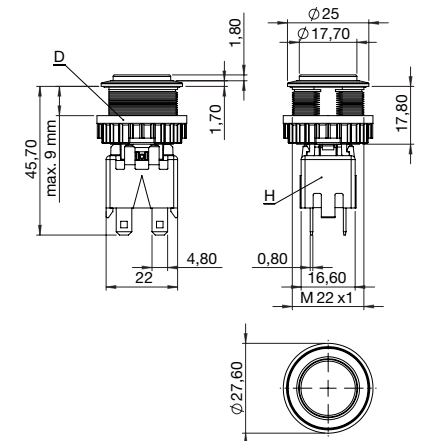
MSM 19 LA PI double-pole



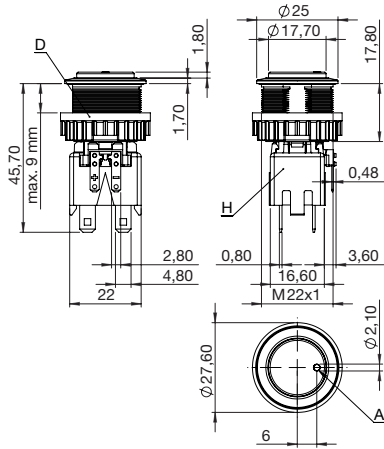
MSM 19 LA RI double-pole



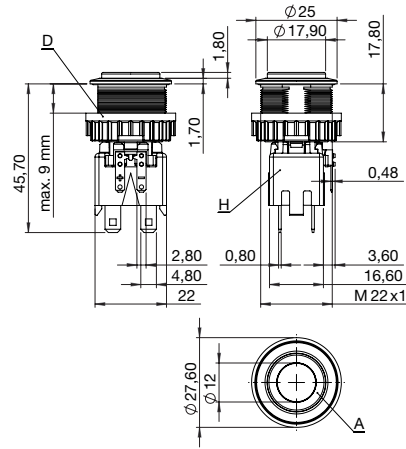
MSM 22 LA ST / LE double-pole



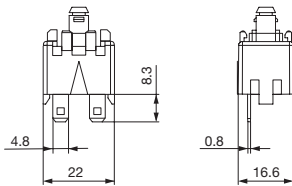
MSM 22 LA PI double-pole



MSM 22 LA RI double-pole



Switching Element single-pole with Push Button Holder



Legend

- A = Illumination Area
- C = Width Across Flats
- D = Nut
- H = Switching Element

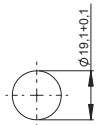
Dimension

MSM 19 LA ST / MSM 19 LA RI

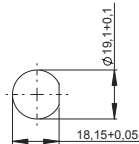
MSM 19 LA LE / MSM 19 LA PI /
MSM 19 LA RI optional

MSM 22 LA ST / MSM 22 LA RI

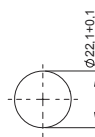
MSM 22 LA LE / MSM 22 LA PI /
MSM 22 LA RI optional



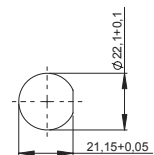
Drilling diagram



Drilling diagram

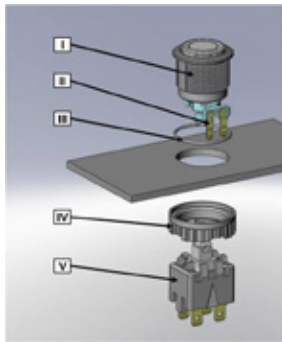


Drilling diagram



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:

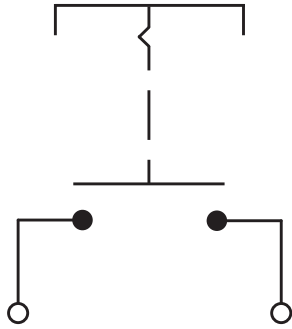
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

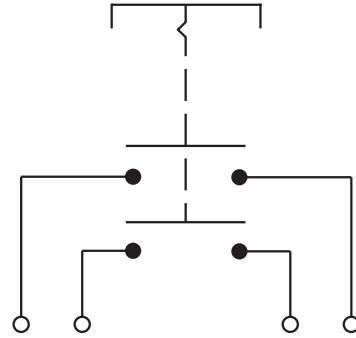
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

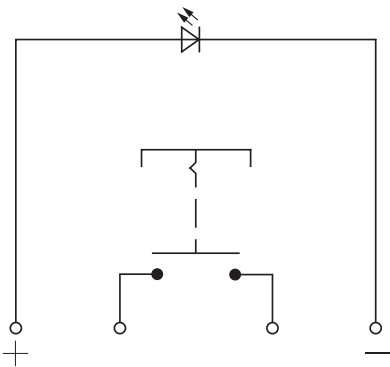
MSM LA ST / LE single-pole



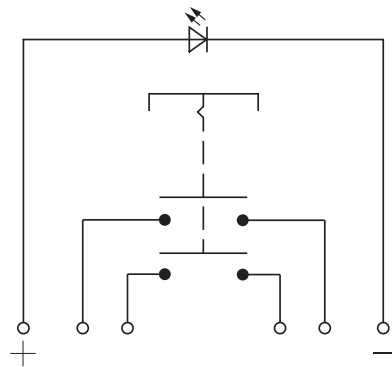
MSM LA ST / LE double-pole



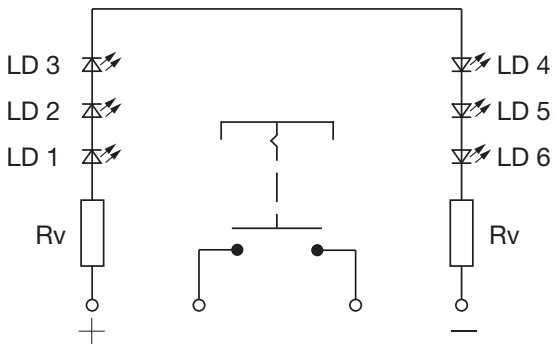
MSM LA PI single-pole



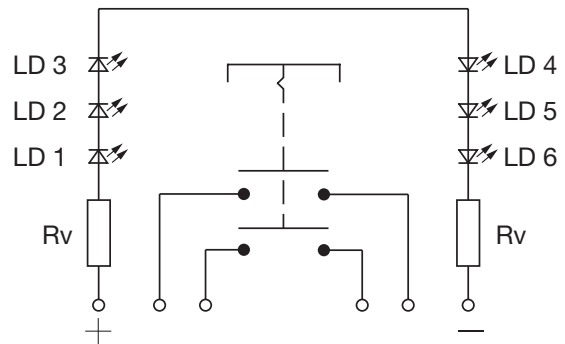
MSM LA PI double-pole



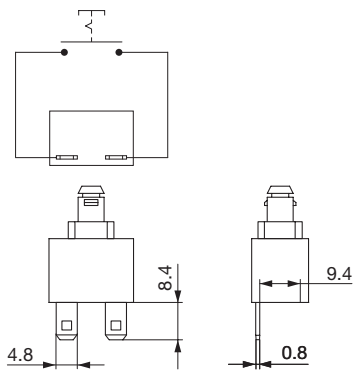
MSM LA RI single-pole



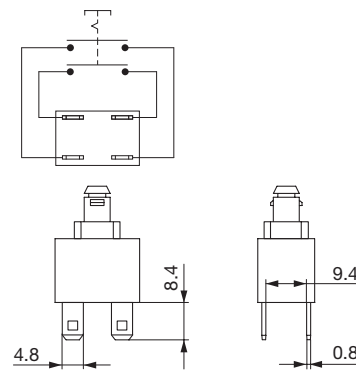
MSM LA RI double-pole



Contact Layout single-pole



Contact Layout double-pole



Point Illumination

Operating Data	Forward Current max.	Forward Current at 10 mA	Forward Current at 8 mA	Forward Current max.
LED red	30 mA	1,9 VDC		3,0 VDC
LED green	30 mA	2,1 VDC		3,0 VDC
LED blue	20 mA		3,7 VDC	4,5 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

For further Lettering details see also weblink:

[General Product Information](#)

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

All Variants

Diameter	Number of Poles	Illumination, LED	Torsion Protection	Config. Code	Order Number
[mm]					
19	1 pole	non-illuminated	yes	MSM 19 LA ST	1241.6821.1110000
19	1 pole	non-illuminated	yes	MSM 19 LA LE	1241.6822.1110000
19	1 pole	Point Illumination, red	yes	MSM 19 LA PI red	1241.6823.1111000
19	1 pole	Point Illumination, green	yes	MSM 19 LA PI green	1241.6823.1112000
19	1 pole	Point Illumination, blue	yes	MSM 19 LA PI blue	1241.6823.1114000
19	1 pole	Ring Illumination, red, 24 VDC	yes	MSM 19 LA RI red	1241.6824.1111000
19	1 pole	Ring Illumination, green, 24 VDC	yes	MSM 19 LA RI green	1241.6824.1112000
19	1 pole	Ring Illumination, blue, 24 VDC	yes	MSM 19 LA RI blue	1241.6824.1114000
19	1 pole	Ring Illumination, white, 24 VDC	yes	MSM 19 LA RI white	1241.6824.1115000
19	2 pole	non-illuminated	yes	MSM 19 LA ST	1241.6821.1120000
19	2 pole	non-illuminated	yes	MSM 19 LA LE	1241.6822.1120000
19	2 pole	Point Illumination, red	yes	MSM 19 LA PI red	1241.6823.1121000
19	2 pole	Point Illumination, green	yes	MSM 19 LA PI green	1241.6823.1122000
19	2 pole	Point Illumination, blue	yes	MSM 19 LA PI blue	1241.6823.1124000
19	2 pole	Ring Illumination, red, 24 VDC	yes	MSM 19 LA RI red	1241.6824.1121000
19	2 pole	Ring Illumination, green, 24 VDC	yes	MSM 19 LA RI green	1241.6824.1122000
19	2 pole	Ring Illumination, blue, 24 VDC	yes	MSM 19 LA RI blue	1241.6824.1124000
22	1 pole	non-illuminated	yes	MSM 22 LA ST	1241.6831.1110000
22	1 pole	non-illuminated	yes	MSM 22 LA LE	1241.6832.1110000
22	1 pole	Point Illumination, red	yes	MSM 22 LA PI red	1241.6833.1111000
22	1 pole	Point Illumination, green	yes	MSM 22 LA PI green	1241.6833.1112000
22	1 pole	Point Illumination, blue	yes	MSM 22 LA PI blue	1241.6833.1114000
22	1 pole	Ring Illumination, red, 24 VDC	yes	MSM 22 LA RI red	1241.6834.1111000
22	1 pole	Ring Illumination, green, 24 VDC	yes	MSM 22 LA RI green	1241.6834.1112000
22	1 pole	Ring Illumination, blue, 24 VDC	yes	MSM 22 LA RI blue	1241.6834.1114000
22	2 pole	non-illuminated	yes	MSM 22 LA ST	1241.6831.1120000
22	2 pole	non-illuminated	yes	MSM 22 LA LE	1241.6832.1120000
22	2 pole	Point Illumination, red	yes	MSM 22 LA PI red	1241.6833.1121000
22	2 pole	Point Illumination, green	yes	MSM 22 LA PI green	1241.6833.1122000
22	2 pole	Point Illumination, blue	yes	MSM 22 LA PI blue	1241.6833.1124000
22	2 pole	Ring Illumination, red, 24 VDC	yes	MSM 22 LA RI red	1241.6834.1121000
22	2 pole	Ring Illumination, green, 24 VDC	yes	MSM 22 LA RI green	1241.6834.1122000
22	2 pole	Ring Illumination, blue, 24 VDC	yes	MSM 22 LA RI blue	1241.6834.1124000

Legend:
 Type: MSM
 CS = Ceramic Surface
 ST = Standard: not lettered
 LE = Lettering: lettered
 AI = BL = Full Surface Backlighting: Lettering possible (see Lettering, last 3 digits)

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.

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 in a bag (enclosed in the box)
-

Metal Switch with Ceramic Actuator, Switching Voltage up to 30 VDC / 250 VAC

new



MSM 19 CS LE BL green



MSM 19 CS LE BL red



MSM 19 CS ST



MSM 22 CS LE BL blue



Description

- Momentary action switch available in version: Standard (ST), with Lettering (LE), with Backlighting (BL)
- Assembly method: clip micro-switch into the saddle, secure switch using mounting nut
- Equipped with flat-pin plugs to permit fast connection

Standards

- DIN EN 61058-1
- UL 1054

Approvals

- Low Voltage Directive 2006/95/EC Low Voltage Directive 2006/95/EC
- VDE / ENEC Certificate Number (Omron): 40008425, 129246, 125256
- UL / CSA File Number (Omron): E41515
- VDE / ENEC Certificate Number (Marquardt): 097550
- UL / CSA File Number (Marquardt): E41791
- KEMA / ENEC File Number (Cherry): 2089323.01
- UL / CSA File Number (Cherry): E23301

Characteristics

- Housing material: high-quality stainless steel, actuator material: highly durable ceramic
- 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
- Backlighting optional, this means the complete actuator surface is fully illuminated
- IP-Protection: IP 65, IP 69K from front side to contact area, Micro-Switch is available in versions IP 40 or IP 67, moving actuator is rated IP 40 to frontside
- for use in harsh environments

References

- Alternative: Standard version
- Alternative: double-pole switch:
- Alternative: switch with latching function:

Weblinks

- html-datasheet: <http://www.schurter.ch/en/Components/Switches/Metal-Line-Switches/MSM-CS-19>
- General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>
- CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)
- RoHS: <http://www.schurter.com/Company/Environment/RoHS>
- CHINA-RoHS: <http://www.schurter.com/china-rohs>
- e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>
- CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>
- Product News: <http://www.schurter.ch/en/New-Products>
- Detailed request for product: http://www.schurter.com/en/Contacts/Contact-Form?type=MSM_CS

Technical Data**Electrical Data**

Switching Function	N.O. / N.C.
Number of Poles	1 pole
Supply Voltage	24 / 12 / 5 VDC Surface backlighting

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	0.05 million actuations at Rated Switching Capacity
Contact Resistance	< 30 mΩ
Insulation Resistance	> 100 MΩ
Duration of Bounce	< 5 ms

Micro Switch 5 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	4.5 N
Actuating Travel	1.0 mm,
Lifetime	1.5 million actuations
Shock Protection	IK 07
Tightening Torque Plastic Nut	max. 4.5 Nm for thread M19, 3.5 Nm for M22
Tightening Torque Stainless Steel Nut	max. 12 Nm for thread M19, 16 Nm for M22

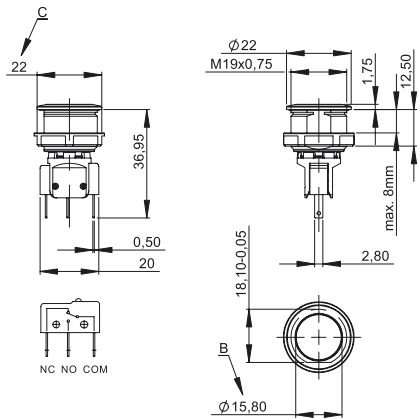
Climatical Data

Operating Temperature	-25 to +85 °C
Storage Temperature	-25 to +85 °C
IP-Protection	IP 65, IP 69K Front Side Contact Area, IP 40 Front Side mechanical, IP 40 / IP 67 Rear Side Contact Area optional
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time

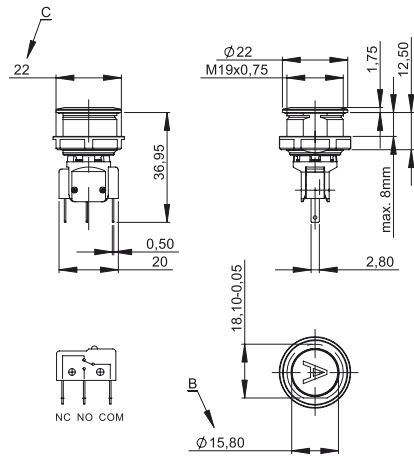
Material

Housing	Stainless Steel
Actuator	Ceramic (Zirconium Dioxide)
Light Conductor (Point Illumination)	NBR70
Illuminated Ring (Ring Illumination)	PA

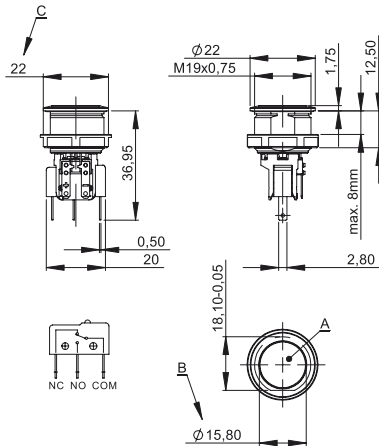
Dimension
MSM 19 CS ST



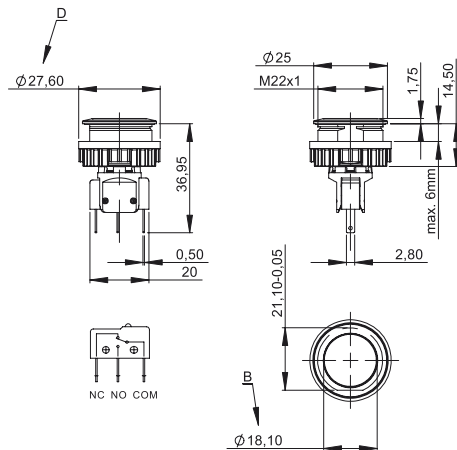
MSM 19 CS LE



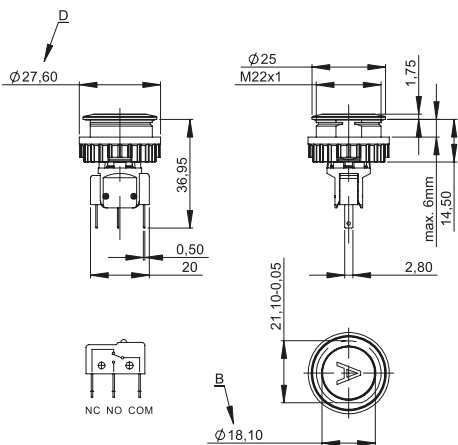
MSM 19 CS BL



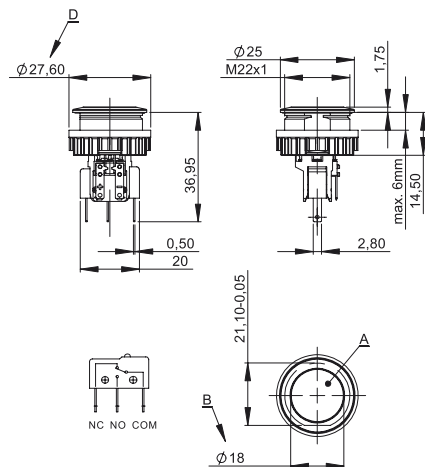
MSM 22 CS ST



MSM 22 CS LE



MSM 22 CS BL

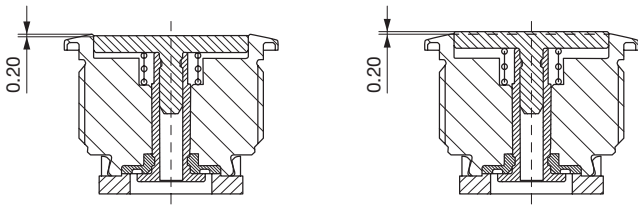


Legend

- 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.

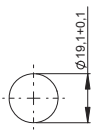
Dimension

MSM 19 CS ST

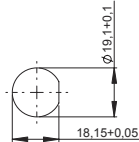
MSM 19 CS LE / MSM 19 CS BL

MSM 22 CS ST

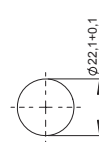
MSM 22 CS LE / MSM 22 CS BL



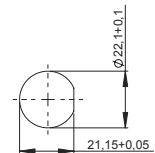
Drilling diagram



Drilling diagram

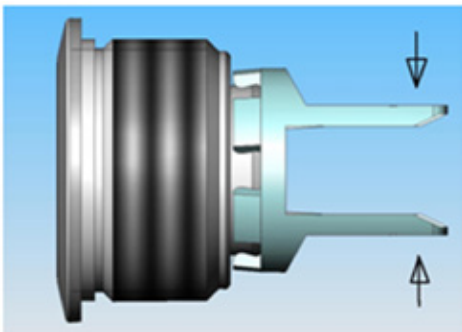


Drilling diagram

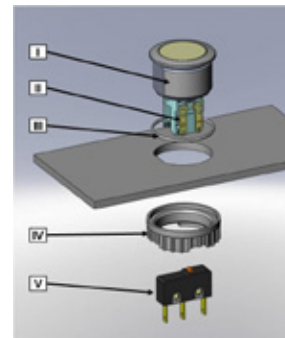


Drilling diagram

Assembly Instructions



During assembly, the protruding bars of the holder should not be pressed together.



- 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 micro switch holder of the actuator housing.

Installation information:

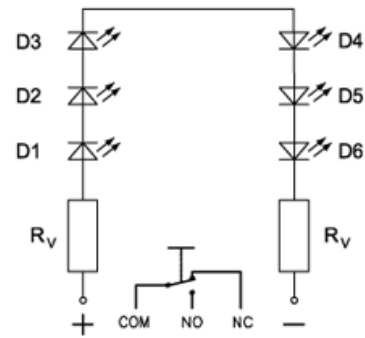
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

MSM CS ST / MSM CS LE



MSM CS BL



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

All Variants

Diameter	Switching Current	Switching Voltage	Illumination, LED	Torsion Protection	Housing Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
19	0.1 A	30 VDC	non-illuminated	no	Stainless Steel	MSM 19 CS ST	1241.7021.1110000
19	5 / 3 A	125 / 250 VDC	non-illuminated	no	Stainless Steel	MSM 19 CS ST	1241.7021.1120000
19	10 A	250 VAC	non-illuminated	no	Stainless Steel	MSM 19 CS ST	1241.7021.1130000
19	5 A	250 VAC	non-illuminated	no	Stainless Steel	MSM 19 CS ST	1241.7021.1180000
19	0.1 A	30 VDC	non-illuminated	yes	Stainless Steel	MSM 19 CS LE	1241.7022.1110000
19	5 / 3 A	125 / 250 VDC	non-illuminated	yes	Stainless Steel	MSM 19 CS LE	1241.7022.1120000
19	10 A	250 VAC	non-illuminated	yes	Stainless Steel	MSM 19 CS LE	1241.7022.1130000
19	5 A	250 VAC	non-illuminated	yes	Stainless Steel	MSM 19 CS LE	1241.7022.1180000
19	0.1 A	30 VDC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111000
19	0.1 A	30 VDC	Backlighted, red, 5 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111000B
19	0.1 A	30 VDC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111004E
19	0.1 A	30 VDC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111005E
19	0.1 A	30 VDC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111006E
19	0.1 A	30 VDC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1111009E
19	0.1 A	30 VDC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1112000
19	0.1 A	30 VDC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1112074
19	0.1 A	30 VDC	Backlighted, green, 12 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1112074E
19	0.1 A	30 VDC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1114000
19	0.1 A	30 VDC	Backlighted, blue, 5 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1114000B
19	0.1 A	30 VDC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1114000E
19	0.1 A	30 VDC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1114046
19	0.1 A	30 VDC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1114076
19	5 / 3 A	125 / 250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1121000
19	5 / 3 A	125 / 250 VAC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1121000E
19	5 / 3 A	125 / 250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1121072
19	5 / 3 A	125 / 250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1121075
19	5 / 3 A	125 / 250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1122000
19	5 / 3 A	125 / 250 VAC	Backlighted, green, 12 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1122000E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124000
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 5 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124000B
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124000E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124002E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124014E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124016E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124018E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124028E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124029E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124071E
19	5 / 3 A	125 / 250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1124074
19	10 A	250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1131000
19	10 A	250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1132000
19	10 A	250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1134000
19	5 A	250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 19 CS BL red	1241.7026.1181000
19	5 A	250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 19 CS BL green	1241.7026.1182000
19	5 A	250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 19 CS BL blue	1241.7026.1184000
22	0.1 A	30 VDC	non-illuminated	no	Stainless Steel	MSM 22 CS ST	1241.7031.1110000
22	5 / 3 A	125 / 250 VDC	non-illuminated	no	Stainless Steel	MSM 22 CS ST	1241.7031.1120000

Diameter	Switching Current	Switching Voltage	Illumination, LED	Torsion Protection	Housing Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
22	10 A	250 VAC	non-illuminated	no	Stainless Steel	MSM 22 CS ST	1241.7031.1130000
22	5 A	250 VAC	non-illuminated	no	Stainless Steel	MSM 22 CS ST	1241.7031.1180000
22	0.1 A	30 VDC	non-illuminated	yes	Stainless Steel	MSM 22 CS LE	1241.7032.1110000
22	5 / 3 A	125 / 250 VDC	non-illuminated	yes	Stainless Steel	MSM 22 CS LE	1241.7032.1120000
22	10 A	250 VAC	non-illuminated	yes	Stainless Steel	MSM 22 CS LE	1241.7032.1130000
22	5 A	250 VAC	non-illuminated	yes	Stainless Steel	MSM 22 CS LE	1241.7032.1180000
22	0.1 A	30 VDC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1111000
22	0.1 A	30 VDC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1112000
22	0.1 A	30 VDC	Backlighted, green, 12 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1112074E
22	0.1 A	30 VDC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 22 CS BL blue	1241.7036.1114000
22	0.1 A	30 VDC	Backlighted, blue, 12 VDC	yes	Stainless Steel	MSM 22 CS BL blue	1241.7036.1114000E
22	0.1 A	30 VDC	Backlighted, white, 5 VDC	yes	Stainless Steel	MSM 22 CS BL white	1241.7036.1115000B
22	5 / 3 A	125 / 250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1121000
22	5 / 3 A	125 / 250 VAC	Backlighted, red, 12 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1121000E
22	5 / 3 A	125 / 250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1121074
22	5 / 3 A	125 / 250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1122000
22	5 / 3 A	125 / 250 VAC	Backlighted, green, 5 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1122065B
22	5 / 3 A	125 / 250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 22 CS BL blue	1241.7036.1124000
22	10 A	250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1131000
22	10 A	250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1132000
22	10 A	250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 22 CS BL blue	1241.7036.1134000
22	5 A	250 VAC	Backlighted, red, 24 VDC	yes	Stainless Steel	MSM 22 CS BL red	1241.7036.1181000
22	5 A	250 VAC	Backlighted, green, 24 VDC	yes	Stainless Steel	MSM 22 CS BL green	1241.7036.1182000
22	5 A	250 VAC	Backlighted, blue, 24 VDC	yes	Stainless Steel	MSM 22 CS BL blue	1241.7036.1184000

Legend:

Type: MSM

CS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

IP 65, IP 69K degree of protection front side contact area; degree of protection rear side contact area IP 40 or IP 67 optional -> see Technical Data Micro Switch

Backlighting versions: Supply voltage 24 VDC, 12 VDC (E), 5 VDC (B), (further 12 or 5 VDC versions on request)

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.

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)

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



Description

- Switch available in version: Standard (ST), with Lettering (LE), with area illumination (AI)
- Assembly by mounting with nut and subsequent clipping of the switching element
- Equipped with flat-pin plugs to permit fast connection

Standards

- DIN EN 61058-1
- UL 1054

Approvals

- Low Voltage Directive 2006/95/EC Low Voltage Directive 2006/95/EC
- KEMA / ENEC File Number (Marquardt): 2106068.01
- UL / CSA File Number (Marquardt): E41791

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 12 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

References

- Alternative: switch with latching function:
- Alternative: Standard version
- Alternative: switch with backlit illumination:

Weblinks

- html-datasheet: <http://www.schurter.ch/en/Components/Switches/Metal-Line-Switches/MSM-LA-CS-19>
- General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>
- CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)
- RoHS: <http://www.schurter.com/Company/Environment/RoHS>
- CHINA-RoHS: <http://www.schurter.com/china-rohs>
- e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>
- CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>
- Product News: <http://www.schurter.ch/en/New-Products>
- Detailed request for product: http://www.schurter.com/en/Contacts/Contact-Form?type=MSM_LA_CS

Technical Data

Electrical Data

Switching Function	N.O.
Number of Poles	1 pole and 2 pole
Supply Voltage	24 VDC Surface backlighting
Surge Strength	4 kV MSM LA CS ST
Switching Voltage	max. 250 VAC, 30 VDC (125 VDC at 0.5 A)
Switching Current	max. 12 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)
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
Tightening Torque Plastic Nut	4.5 Nm for thread M19, 3.5 Nm for M22
Tightening Torque Stainless Steel Nut	12 Nm for thread M19, 16 Nm for M22

Climatical Data

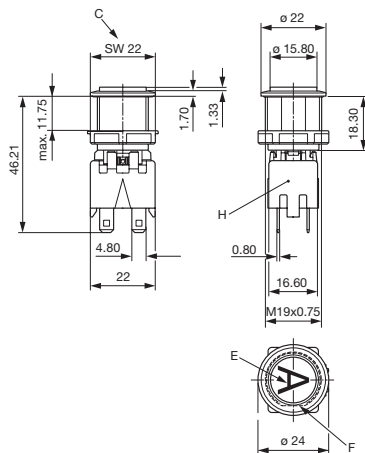
Operating Temperature	-20 to +85 °C
Storage Temperature	-20 to +85 °C
IP-Protection	IP 64 Front Side Contact Area, IP 40 Front Side mechanical, IP 00 Rear Side
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time

Material

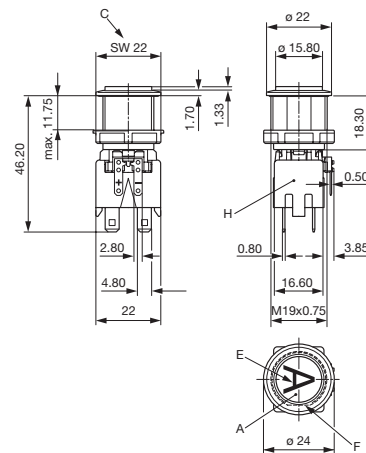
Housing	Stainless Steel
Actuator (disc, outside housing)	Ceramic
Gasket	NBR70
Switcher Collet	PA66 (UL94-V0 related to $d \geq 1.6$ mm)
Intermediate Connector	PA66 (UL94-V0 related to $d \geq 1.6$ mm)
Contact Pin Adapter	PA66 (UL94-V0 related to $d \geq 1.6$ mm)

Dimension

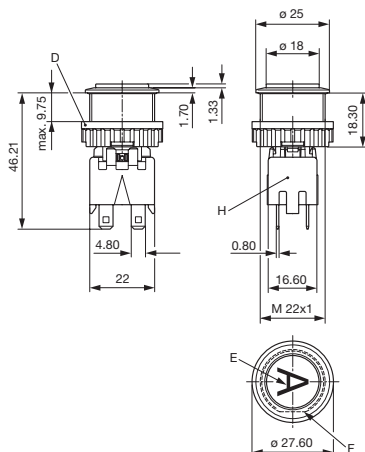
MSM 19 LA CS ST / double-pole



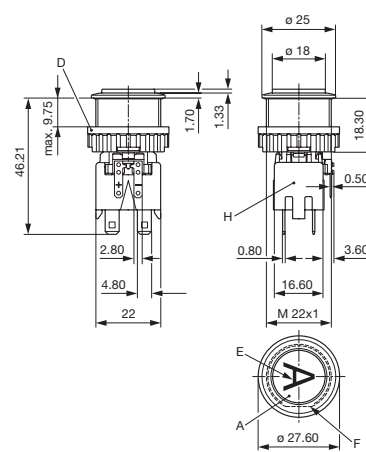
MSM 19 LA CS AI / double-pole



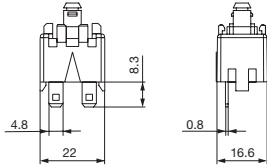
MSM 22 LA CS ST / double-pole



MSM 22 LA CS AI / double-pole



Switching Element single-pole with Push Button Holder

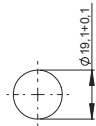


Legend

- A = Illumination Area
- C = Width Across Flats
- D = Knurled Nut
- E = Lettering
- F = Anti-Rotation
- H = Switching Element

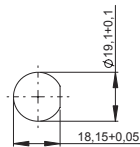
Dimension

MSM 19 LA CS (without torsion protection)



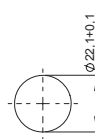
Drilling diagram

MSM 19 LA CS (with torsion protection)



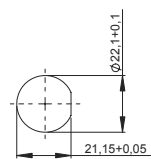
Drilling diagram

MSM 22 LA CS (without torsion protection)



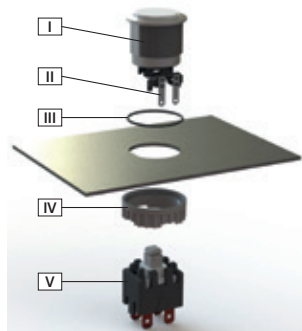
Drilling diagram

MSM 22 LA CS (with torsion protection)



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:

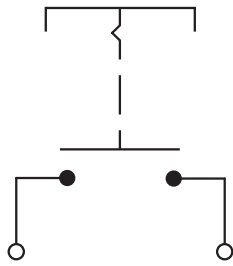
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

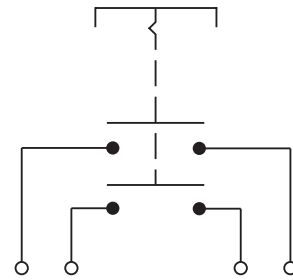
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

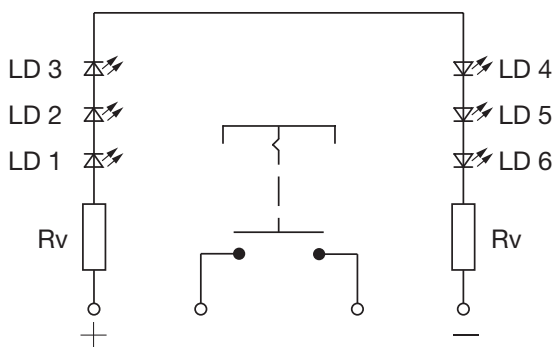
MSM LA CS ST / single-pole



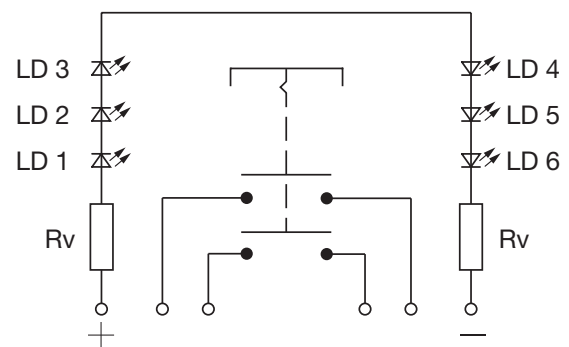
MSM LA CS ST / double-pole



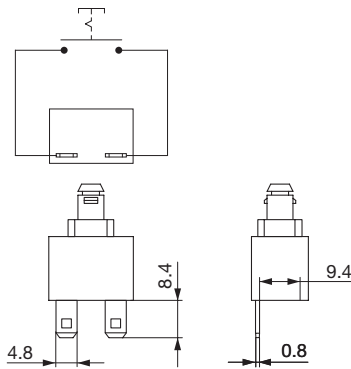
MSM LA CS AI / single-pole



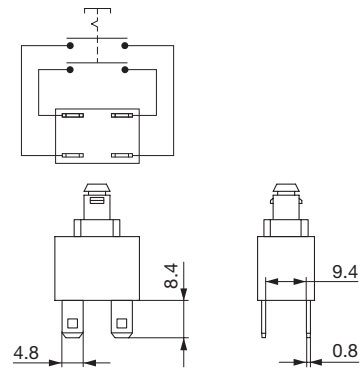
MSM LA CS AI / double-pole



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

All Variants

Diameter	Number of Poles	Illumination, LED	Torsion Protection	Config. Code	Order Number
[mm]					
19	1 pole	non-illuminated	yes	MSM 19 LA CS ST	1241.7221.1110000
19	1 pole	Backlighted, red, 24 VDC	yes	MSM 19 LA CS AI red	1241.7226.1111000
19	1 pole	Backlighted, green, 24 VDC	yes	MSM 19 LA CS AI green	1241.7226.1112000
19	1 pole	Backlighted, yellow, 24 VDC	yes	MSM 19 LA CS AI yellow	1241.7226.1113000
19	1 pole	Backlighted, blue, 24 VDC	yes	MSM 19 LA CS AI blue	1241.7226.1114000
19	1 pole	Backlighted, white, 24 VDC	yes	MSM 19 LA CS AI white	1241.7226.1115000
19	1 pole	Backlighted, Orange, 24 VDC	yes	MSM 19 LA CS AI orange	1241.7226.1117000
19	2 pole	non-illuminated	yes	MSM 19 LA CS ST	1241.7221.1120000
19	2 pole	Backlighted, red, 24 VDC	yes	MSM 19 LA CS AI red	1241.7226.1121000
19	2 pole	Backlighted, green, 24 VDC	yes	MSM 19 LA CS AI green	1241.7226.1122000
19	2 pole	Backlighted, yellow, 24 VDC	yes	MSM 19 LA CS AI yellow	1241.7226.1123000
19	2 pole	Backlighted, blue, 24 VDC	yes	MSM 19 LA CS AI blue	1241.7226.1124000
19	2 pole	Backlighted, white, 24 VDC	yes	MSM 19 LA CS AI white	1241.7226.1125000
19	2 pole	Backlighted, Orange, 24 VDC	yes	MSM 19 LA CS AI orange	1241.7226.1127000
22	1 pole	non-illuminated	yes	MSM 22 LA CS ST	1241.7231.1110000
22	1 pole	Backlighted, red, 24 VDC	yes	MSM 22 LA CS AI red	1241.7236.1111000
22	1 pole	Backlighted, green, 24 VDC	yes	MSM 22 LA CS AI green	1241.7236.1112000
22	1 pole	Backlighted, yellow, 24 VDC	yes	MSM 22 LA CS AI yellow	1241.7236.1113000
22	1 pole	Backlighted, blue, 24 VDC	yes	MSM 22 LA CS AI blue	1241.7236.1114000
22	1 pole	Backlighted, white, 24 VDC	yes	MSM 22 LA CS AI white	1241.7236.1115000
22	1 pole	Backlighted, Orange, 24 VDC	yes	MSM 22 LA CS AI orange	1241.7236.1117000
22	2 pole	non-illuminated	yes	MSM 22 LA CS ST	1241.7231.1120000
22	2 pole	Backlighted, red, 24 VDC	yes	MSM 22 LA CS AI red	1241.7236.1121000
22	2 pole	Backlighted, green, 24 VDC	yes	MSM 22 LA CS AI green	1241.7236.1122000

Diameter	Number of Poles	Illumination, LED	Torsion Protection	Config. Code	Order Number
[mm]					
22	2 pole	Backlighted, yellow, 24 VDC	yes	MSM 22 LA CS AI yellow	1241.7236.1123000
22	2 pole	Backlighted, blue, 24 VDC	yes	MSM 22 LA CS AI blue	1241.7236.1124000
22	2 pole	Backlighted, white, 24 VDC	yes	MSM 22 LA CS AI white	1241.7236.1125000
22	2 pole	Backlighted, Orange, 24 VDC	yes	MSM 22 LA CS AI orange	1241.7236.1127000

Legend:

Type: MSM

CS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

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.

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 in a bag (enclosed in the box)

Momentary action switch double pole



MSM 19 DP PI red



MSM 22 DP RI blue



MSM 30 DP ST



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

Standards

- DIN EN 61058-1
- UL 1054

Approvals

- Low Voltage Directive 2006/95/EC Low Voltage Directive 2006/95/EC
- VDE / ENEC Certificate Number (Omron): 40008425, 129246, 125256
- UL / CSA File Number (Omron): E41515
- VDE / ENEC Certificate Number (Marquardt): 097550
- UL / CSA File Number (Marquardt): E41791
- KEMA / ENEC File Number (Cherry): 2089323.01
- UL / CSA File Number (Cherry): E23301

Characteristics

- Housing and actuating area material: high-quality stainless steel for use in harsh environments
- 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
- optional with point or ring illumination
- 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, moving actuator is rated IP 40 to frontside

References

- Alternative: Standard version
- Alternative: switch with latching function:
- Alternative: switch with backlighted illumination:

Weblinks

- html-datasheet: <http://www.schurter.ch/en/Components/Switches/Metal-Line-Switches/MSM-DP-19>
- General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>
- CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)
- RoHS: <http://www.schurter.com/Company/Environment/RoHS>
- CHINA-RoHS: <http://www.schurter.com/china-rohs>
- e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>
- CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>
- Product News: <http://www.schurter.ch/en/New-Products>
- Detailed request for product: http://www.schurter.com/en/Contacts/Contact-Form?type=MSM_DP

Technical Data

Electrical Data

Switching Function	N.O., N.C., N.O./N.C.
Number of Poles	2 pole
Supply Voltage	24 / 12 / 5 VDC Ring Illumination, Point Illumination without series resistor, LED operating data are listed in separate table
Surge Strength	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 5 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, for mounting diameter 19, 22 mm 1.2 mm for mounting diameter 30 mm
Lifetime	1.5 million actuations
Shock Protection	IK 07 ,
Tightening Torque Plastic Nut	max. 4.5 Nm for thread M19, 3.5 Nm for M22, 8 Nm for M30
Tightening Torque Stainless Steel Nut	max. 12 Nm for thread M19, 16 Nm for M22, 50 Nm for M30

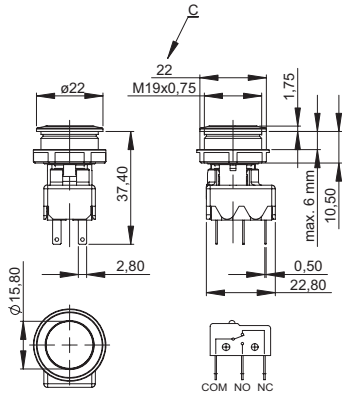
Climatical Data

Operating Temperature	-25 to +85 °C
Storage Temperature	-25 to +85 °C
IP-Protection	IP 67 Front Side Contact Area, IP 40 Front Side mechanical, IP 40 / IP 67 Rear Side Contact Area optional
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time

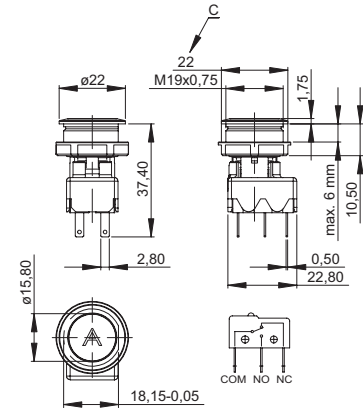
Material

Housing	Stainless Steel
Actuator	Stainless Steel
Light Conductor (Point Illumination)	PC
Illuminated Ring (Ring Illumination)	PA
Gasket	NBR70
Switcher Collet	PA
Intermediate Connector non-illuminated	PA
Intermediate Connector illuminated	PA
Switcher Adapter	PA

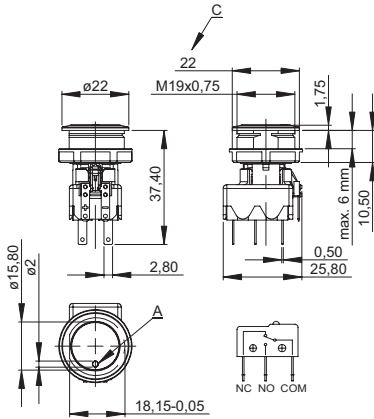
Dimension
 MSM 19 DP ST



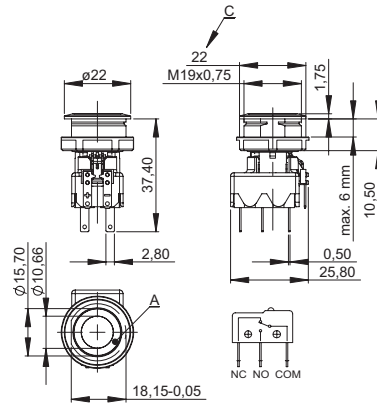
MSM 19 DP LE



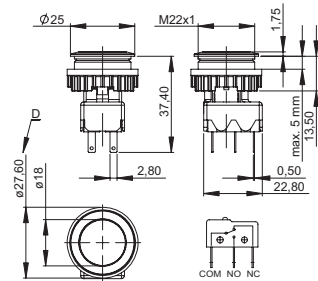
MSM 19 DP PI



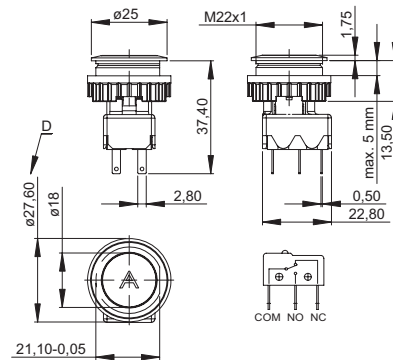
MSM 19 DP RI



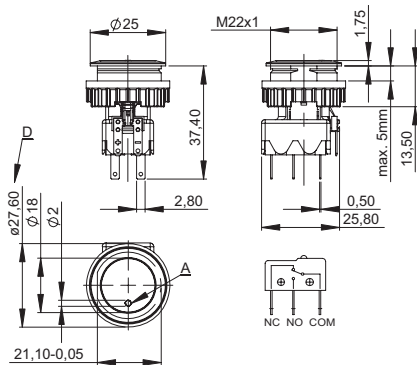
MSM 22 DP ST



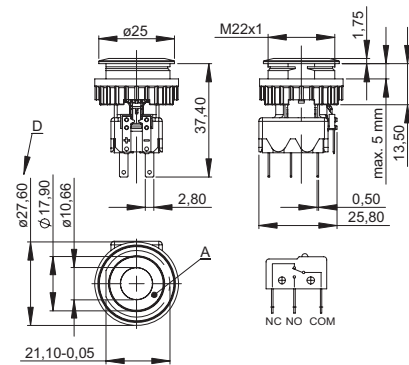
MSM 22 DP LE



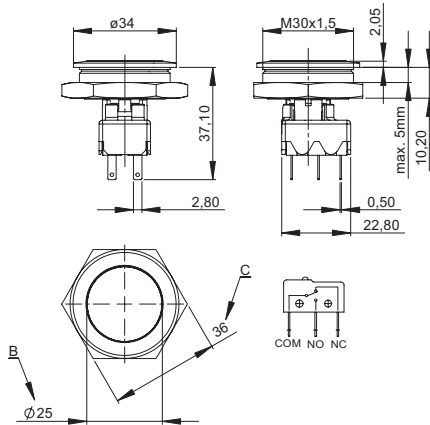
MSM 22 DP PI



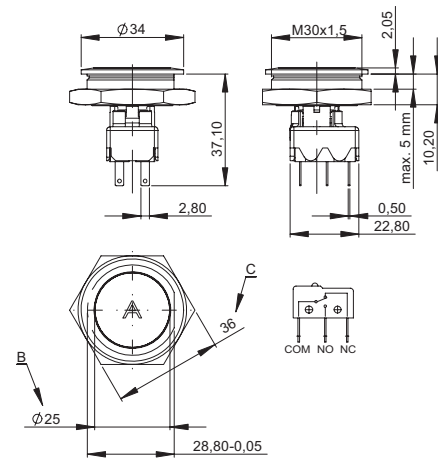
MSM 22 DP RI



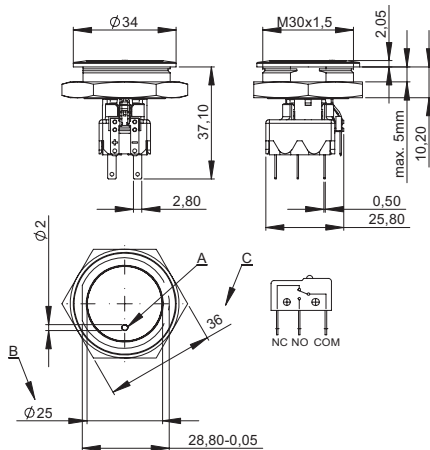
MSM 30 DP ST



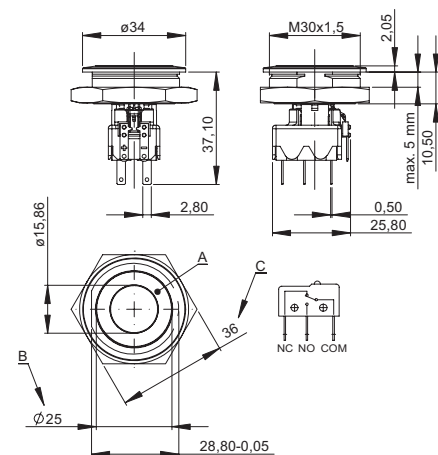
MSM 30 DP LE



MSM 30 DP PI



MSM 30 DP RI

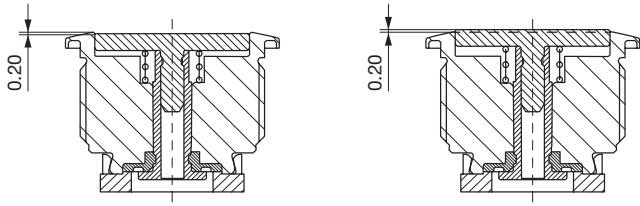


Legend

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

Tolerance Range

Actuator Tolerance Range

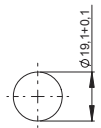


The mounting tolerance range of the actuator varies from 0.2 mm projection length and 0.2 mm short length to the housing edge. The slanting position of the actuator can range within this tolerance.

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.

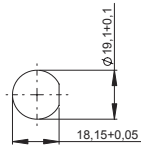
Dimension

MSM 19 DP ST / MSM 19 DP RI



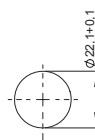
Drilling diagram

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



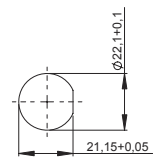
Drilling diagram

MSM 22 DP ST / MSM 22 DP RI



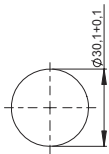
Drilling diagram

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



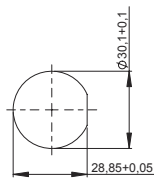
Drilling diagram

MSM 30 DP ST / MSM 30 DP RI



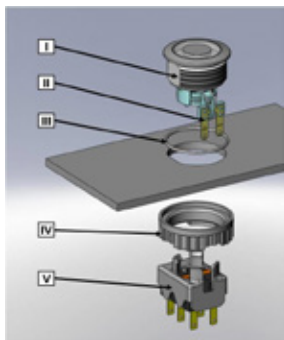
Drilling diagram

MSM 30 DP LE / MSM 30 DP PI /
MSM 30 DP RI optional



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:

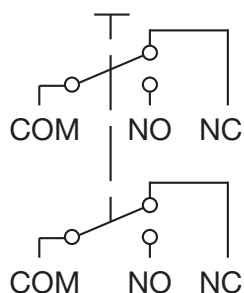
- 1.) Place the gasket accurately on the actuator housing. Then mount the actuator housing assembly into the panel.
- 2.) Tighten the screw nut according to the torque instructions.
- 3.) Clasp the module switching contact into the actuator housing.

Installation information:

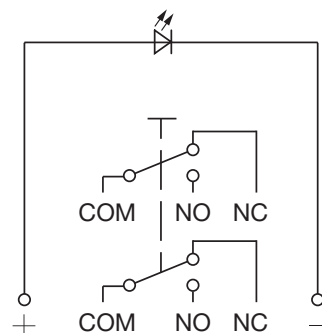
- 1.) The power supply and the configuration of the flat pin terminals have to be installed correctly for the illumination and micro switch function.
- 2.) Insulate the terminals as required. Fully insulated plug-in sleeves are recommended.
- 3.) Installation instructions according to VDE-standard DIN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

Diagrams

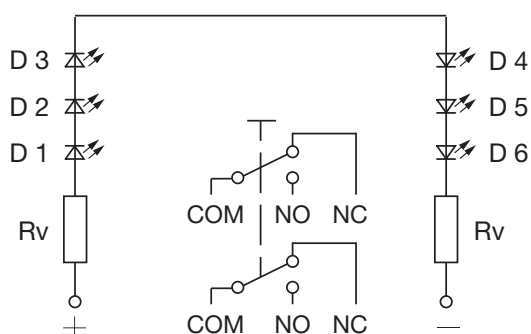
MSM DP ST / MSM DP LE



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

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

For further Lettering details see also weblink:

[General Product Information](#)

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

All Variants

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
19	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 19 DP ST	1241.6921.1120000
19	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 19 DP LE	1241.6922.1120000
19	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 19 DP PI red	1241.6923.1121000
19	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 19 DP PI green	1241.6923.1122000
19	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 19 DP PI blue	1241.6923.1124000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 DP RI red	1241.6924.1121000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 DP RI green	1241.6924.1122000
19	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 19 DP RI blue	1241.6924.1124000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 22 DP ST	1241.6931.1120000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 22 DP LE	1241.6932.1120000
22	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 22 DP PI red	1241.6933.1121000
22	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 22 DP PI green	1241.6933.1122000
22	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 22 DP PI blue	1241.6933.1124000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 DP RI red	1241.6934.1121000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 DP RI green	1241.6934.1122000
22	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 22 DP RI blue	1241.6934.1124000
30	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,no	Stainless Steel	MSM 30 DP ST	1241.6961.1120000
30	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel ,yes	Stainless Steel	MSM 30 DP LE	1241.6962.1120000
30	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel ,yes	Stainless Steel	MSM 30 DP PI red	1241.6963.1121000
30	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel ,yes	Stainless Steel	MSM 30 DP PI green	1241.6963.1122000

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material, Torsion Protection	Actuator Material	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
30	5 / 3 A	125 / 250 VAC	Point Illumination, blue	Stainless Steel ,yes	Stainless Steel	MSM 30 DP PI blue	1241.6963.1124000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, red, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 DP RI red	1241.6964.1121000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, green, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 DP RI green	1241.6964.1122000
30	5 / 3 A	125 / 250 VAC	Ring Illumination, blue, 24 VDC	Stainless Steel ,yes	Stainless Steel	MSM 30 DP RI blue	1241.6964.1124000

Legend:

Type: MSM

CS = Ceramic Surface

ST = Standard: not lettered

LE = Lettering: lettered

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

Alu red = red anodized aluminum housing, actuator stainless steel

1241.6622.3120062 -> 3 last numbers (062) see Order Index Lettering

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

Ring illuminated versions: supply voltage 24 VDC, 12 VDC (E), 5 VDC (B), (further 12 and 5 VDC versions on request)

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.

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)



- 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)

Metal switch medium stroke, snap-in, Switching Voltage up to 250V



MSM 22 SI snap in mounting

Description

- Switches with snap-in mounting from the frontside
- Available in version Standard, lettered, with Point Illumination or Ring Illumination
- Further characteristics see MSM 22 data sheet

Characteristics

- Housing and actuator made of high quality stainless steel
- Quick Assembly by snap-in mounting from the front side
- Short Mounting Depth, for assembly with no access from rear side

References

Alternative: Standard version

Weblinks

html-datasheet: <http://www.schurter.ch/en/Components/Switches/Metal-Line-Switches/MSM-SI-22>
General Product Information: <http://www.schurter.ch/en/Components/Switches/General-Product-Information>
CE declaration of conformity: [http://www.schurter.com/en/Documents-References/Approvals/\(id\)/MSM+AND+FIELD+CertificationInstitute=SAG](http://www.schurter.com/en/Documents-References/Approvals/(id)/MSM+AND+FIELD+CertificationInstitute=SAG)
RoHS: <http://www.schurter.com/Company/Environment/RoHS>
CHINA-RoHS: <http://www.schurter.com/china-rohs>
e-Shop: <http://www.schurter.ch/en/Stock-Check/e-Shop>
CAD-Drawings: <http://www.schurter.ch/en/Documents-References/CAD-Drawings>
Product News: <http://www.schurter.ch/en/New-Products>
Detailed request for product: http://www.schurter.com/en/Contacts/Contact-Form?type=MSM_SI

Technical Data

Electrical Data

Data	See MSM data sheet
------	--------------------

Mechanical Data

Mounting	snap-in
Mounting Diameter	Ø 22 mm
Drilling tolerance	max. 0.15 mm / Drilling edges free of burrs
Panel Thickness	1.5; 2.0; 2.5; 3.0 mm
Mounting Force	50 - 100 N
Data	See MSM data sheet

Climatical Data

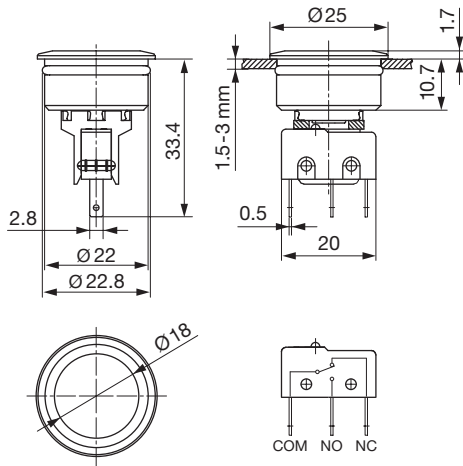
Data	See MSM data sheet
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Material

Housing	Stainless Steel
Gasket	NBR70

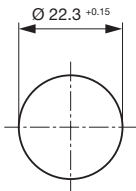
Dimension

MSM 22 SI



Dimension

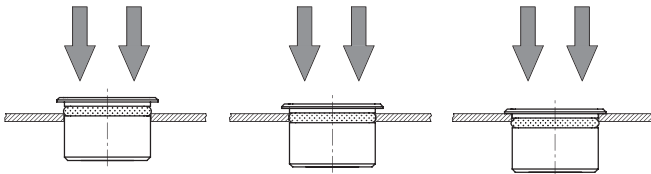
SI 22



Drilling diagram

Assembly Instructions

Mounting diagram



The assembly becomes effective by the force fitting of the switch into the drilling hole, whereas the O-ring will be displaced. After inserting the switch through the drilling hole, the O-ring expands and the switch is fixed in the drilling hole.

All Variants

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material	Panel Thickness	Config. Code	Order Number
[mm]	[A]	[VAC/ VDC]					
22	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel	1.5mm	MSM 22 SI PI red	1241.6693.1121000
22	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel	1.5mm	MSM 22 SI PI green	1241.6693.1122000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel	1.5mm	MSM 22 SI ST	1241.6695.1120000
22	5 / 3 A	125 / 250 VAC	Point Illumination, red	Stainless Steel	2mm	MSM 22 SI PI red	1241.6697.1121000
22	5 / 3 A	125 / 250 VAC	Point Illumination, green	Stainless Steel	2mm	MSM 22 SI PI green	1241.6697.1122000
22	5 / 3 A	125 / 250 VAC	non-illuminated	Stainless Steel	2mm	MSM 22 SI ST	1241.6699.1120000
22	5 A	250 VAC	non-illuminated	Stainless Steel	2mm	MSM 22 SI ST	1241.6699.1180000

Diameter	Switching Current	Switching Voltage	Illumination, LED	Housing Material	Panel Thickness	Config. Code	Order Number
[mm]	[A]	[VAC/VDC]					

Legend:

Type: MSM

PI = Point Illumination

RI = Ring Illumination

Alu = Aluminium

ES = Stainless steel

Point illuminated versions without resistors, details see MSM data sheet

Further snap-in versions and customer-specific solutions on request.

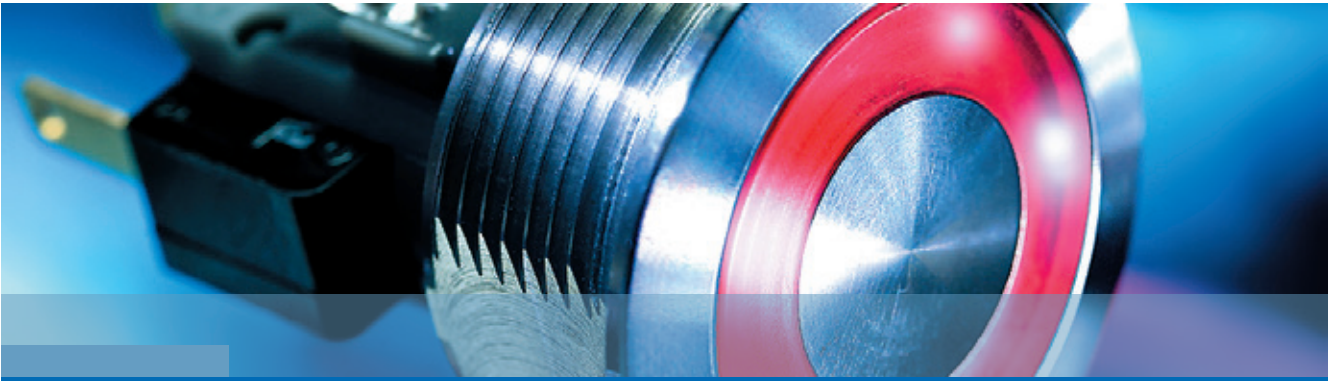
Special materials for use in salt and chlorinated environment on request.

Packaging Unit 10 in box with insert (10 pcs.)

Best Products Worldwide

"Both, now and in the future, our customers are guaranteed the best products world-wide; products which perfectly correspond to their individual needs. SCHURTER is permanently committed to the excellent quality of its products and business practices which are ecologically sound."

Hans-Rudolf Schurter, SCHURTER Holding AG



Metal Pushbutton Switch with IP67 Sealed Contact System

The metal switch series MSM was extended by variants with a new IP67 sealed contact system. Therefore, the safety and performance of the switch in critical applications can be increased.

If high humidity occurs or water leaks through the opening into the housing, it becomes necessary to use the version with increased seal protection of the contact system. For such applications SCHURTER offers an IP67 protected contact system.

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safe&easy

schurter.com

Circuit Protection

Connectors

EMC Products

Switches

Input Systems

Electronic Manufacturing Services

Solutions