Metal Switch Short Stroke

Non-illuminated
Actuator stainless steel

Point Illumination
red / green
Actuator stainless steel

Non-illuminated
Actuator zinc die-cast

See below:
Approvals and Compliances

Description

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

Unique Selling Proposition

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

Characteristics

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

References

Alternative: Other diameter MCS 19

Weblinks

pdf data sheet, html datasheet, General Product Information, CAD-Drawings, Product News, Detailed request for product

Technical Data

Electrical Data	
Switching Function	N.O.
Supply Voltage	LED operating data are listed in separate table
Impulse Withstand Voltage (ESD)	8 kV with Ring Illumination
Contact Material Silver	
Switching Voltage	min. 4 VDC , max. 48 VDC
Switching current	max. 125 mA
Rated Switching Capacity	1.2 W
Lifetime	1 million actuations at Rated Switching Capacity
Contact Resistance	< 50 mΩ, < 150 mΩ after lifetime
Insulation Resistance	> 100 MΩ
Duration of Bounce	< 1 ms
Contact Material Gold	
Switching Voltage	min. 50 mVDC, max. 24 VDC
Switching current	max. 80 mA
Rated Switching Capacity	0.36 W
Lifetime	1 million actuations at Rated Switching Capacity
Contact Resistance	< 50 mΩ, < 150 mΩ after lifetime
Insulation Resistance	> 100 MΩ
Duration of Bounce	< 1 ms

Mechanical Data	
Actuating Force	Max. 5 N
Actuating Travel	Max. 0.4 mm
Lifetime	1 million actuations
Shock Protection	IK06
Mounting screw torque	0.4 Nm with Sealing Ring, 1.5 Nm without Sealing Ring
Climatical Data	
Operating Temperature	-20 to 60 °C
Storage Temperature	-20 to 60 °C
Protection Class	IP67 with O-Ring
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time
Other Data	
Contact Material	Ag / Au
Soldering Data	
Tinning	260 °C / 2 sec according to DIN IEC 60068-2-20
Solderability	260 °C / 2 sec (IEC 60068-2-20 Test Ta Method 1)
Resistance to Soldering Heat	260 °C / 5 sec (IEC 60068-2-20 Test Tb Method 1A)
Material	
Housing	Zinc Die Casting Nickel Plated
Actuator unlettered	Zinc Die Casting Nickel Plated
Actuator lettered	Stainless Steel 1.4301
Contact	CuZn37 2,5 µm Ag
Snap Dome	X 12 CrNi 177 gold plated
Socket	PA

Approvals and Compliances

Detailed information on product approvals, code requirements, usage instructions and detailed test conditions can be looked up in Details about Approvals

SCHURTER products are designed for use in industrial environments. They have approvals from independent testing bodies according to national and international standards. Products with specific characteristics and requirements such as required in the automotive sector according to IATF 16949, medical technology according to ISO 13485 or in the aerospace industry can be offered exclusively with customer-specific, individual agreements by SCHURTER.

Application standards

Application standards where the product can be used

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

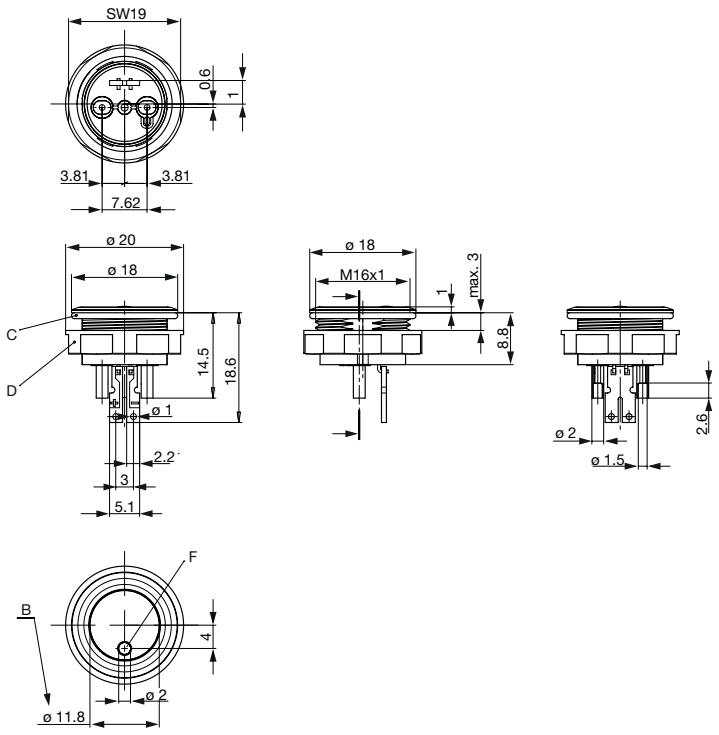
Compliances

The product complies with following Guide Lines

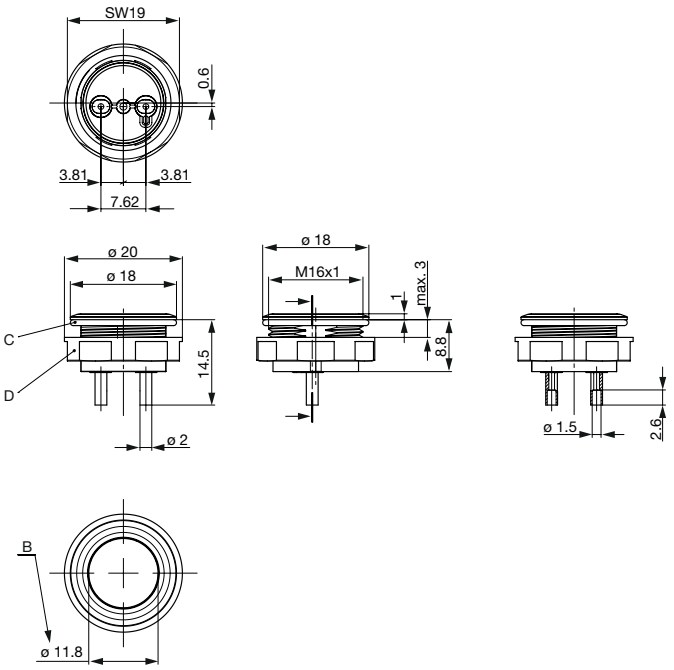
Identification	Details	Initiator	Description
RoHS COMPLIANT	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered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

Dimension [mm]

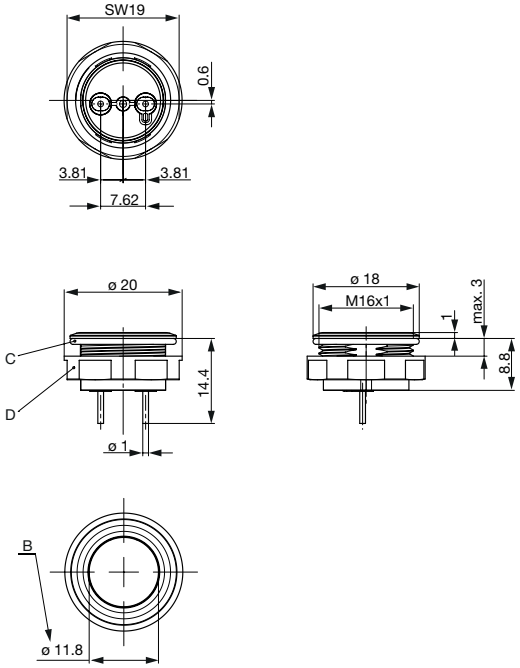
MCS 16 PI



MCS 16 with soldering aid

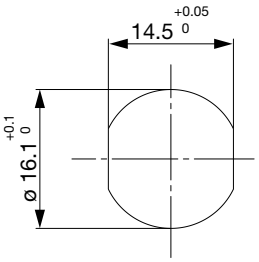


MCS 16 with pins

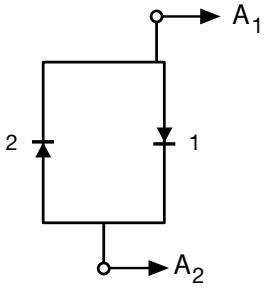


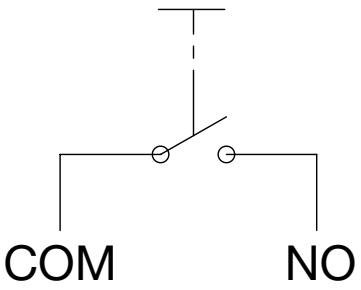
Legend
B = Actuating Area
C = Sealing
D = Nut
F = Point illumination

Dimension



Diagrams





1. Illumination color
2. Illumination color

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

Point Illumination

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

Recommendation of series resistors for point illumination

LED-Color	I_D [mA]	I_{DMax} [mA]	U_D [V]*	U_{DMax} x [V]*	U_V [V]	R_V [Ω]	R_V E24 [Ω]	P_V [W]**	U_V [V]	R_V [Ω]	R_V E24 [Ω]	P_V [W]**	U_V [V]	R_V [Ω]	R_V E24 [Ω]	P_V [W]
					5				12				24			
red	**10**	---	**1,9**	---	**310**	***330***	**0,03**	**1010**	***1000***	**0,10**	**2210**	***2200***	**0,22**
	---	30	---	3,0	67	*68*	0,06	300	*300*	0,27	700	*750*	0,63
green	**10**	---	**2,1**	---	**290**	***300***	**0,03**	**990**	***1000***	**0,10**	**2190**	**2200**	**0,22**
	---	30	---	3,0	67	*68*	0,06	300	*300*	0,27	700	750	0,63
Yellow	**10**	---	**2,1**	---	**290**	***300***	**0,03**	**990**	***1000***	**0,10**	**2190**	**2200**	**0,22**
	---	30	---	3,0	67	*68*	0,06	300	*300*	0,27	700	750	0,63
blue	**10**	---	**3,8**	---	**120**	***120***	**0,01**	**820**	***820***	**0,08**	**2020**	**2200**	**0,20**
	---	20	---	4,5	25	*27*	0,01	375	*390*	0,15	975	1000	0,39
red/green	**10**	---	**2,0**	---	**300**	***300***	**0,03**	**1000**	***1000***	**0,10**	**2200**	**2200**	**0,22**
	---	25	---	2,5	100	*100*	0,06	380	*390*	0,24	860	910	0,54

I_D	LED-Forward Current [10mA]
I_{DMax}	LED-Forward Current max. [20mA/25mA/30mA]
U_D	LED-Forward voltage [10mA]
U_{DMax}	LED-Forward voltage max. [20mA/25mA/30mA]
R_V	Series Resistor (calculated)
R_V E24	Series Resistor (regarding E24-Resistor series)
P_V	Power dissipation concerning R_V (calculated)

Lettering Colour of Laser Lettering

Material	Lettering Colour	
Stainless Steel	black	Filled letters

Order Index Lettering

Laser Marking			
001 =**A**	021 =**U**	041 =÷	061 =**EIN**
002 =**B**	022 =**V**	042 = ✳	062 =**AUS**
003 =**C**	023 =**W**	043 ==**=**	063 =**AUF**
004 =**D**	024 =**X**	044 = #	064 =**AB**
005 =**E**	025 =**Y**	045 = ↔	065 =**ON**
006 =**F**	026 =**Z**	046 = ↕	066 =**OFF**
007 =**G**	027 =**0**	047 = →	067 =**UP**
008 =**H**	028 =**1**	048 = ←	068 =**DOWN**
009 =**I**	029 =**2**	049 = ↓	069 =**HIGH**
010 =**J**	030 =**3**	050 = ↑	070 =**LOW**
011 =**K**	031 =**4**	051 = %	071 =**ON/OFF**
012 =**L**	032 =**5**	052 = √	072 =**START**
013 =**M**	033 =**6**	053 =**CTRL**	073 =**RESET**
014 =**N**	034 =**7**	054 =**RETURN**	074 =
015 =**O**	035 =**8**	055 =**SHIFT**	075 =
016 =**P**	036 =**9**	056 =**LOCK**	076 =
017 =**Q**	037 =**+**	057 =**STOP**	077 =
018 =**R**	038 =**-**	058 =**ENTER**	
019 =**S**	039 =**.**	059 =**BACK**	
020 =**T**	040 = x	060 =**LINE**	
Please note that the font size depends on the number of characters			

Variants

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

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

Nut with gasket are enclosed in the box.

Availability for all products can be searched real-time:https://www.schurter.com/en/info-center/support-tools/stock-check-distributors

Packaging unit 20 in box with insert

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

15.09.2026

The specifications, descriptions and illustrations indicated in this document are based on current information. All content is subject to modifications and amendments. Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability and test each product selected for their own applications.