#### Metal Switch Short Stroke



metal switch Point Illumination red / green



metal switch lettered



metal switch Point Illumination blue

#### See below:

#### **Approvals and Compliances**

#### **Description**

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

#### **Characteristics**

- Housing and 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
- For indoor use, no illumination, no lettering
- Stainless Steel for actuator
- Optional point illumination and laser lettering with standard or customer-specific symbols
- Stainless Steel for housing and actuator for use in harsh environments outdoors (see technical data)
- Varnished Version
- Colour adjustments to customer housings possible, as standard: Signal colors red, green and yellow, optional: housing or actuator varnishing according to provided color specifications
- the varnished actuators are sealed by transparent lacqueur after the laser lettering

#### Weblinks

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 sepa-
	rate table
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 m $\Omega$ , $<$ 150 m $\Omega$ 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	$< 50  \text{m}\Omega, < 150  \text{m}\Omega$ after lifetime
Insulation Resistance	> 100 MΩ
Duration of Bounce	< 1 ms

Mechanical Data	
Actuating Force	3.7 N
Actuating Travel	0.4 mm
Lifetime	1 million actuations
Shock Protection	IK 06
Mounting screw torque	0.4 Nm with Sealing Ring, 1.5 Nm wit-
	hout 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	24 h / 48 h / 96 h Residence Time
50021-SS)	
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	
Housings	Stainless Steel 1.4301 / Zinc Die Ca-
	sting Nickel Plated
Actuator unlettered	Zinc Die Casting Nickel Plated
Actuator lettered	Stainless Steel
Contact	CuZn37 2,5 µm Ag
Snap Dome	X 12 CrNi 177 gold plated
Socket	PA

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
<u>IEC</u>	Designed for applications acc.	IEC/UL 60950	IEC 60950-1 includes the basic requirements for the safety of information technology equipment.

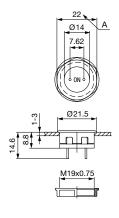
## Compliances

The product complies with following Guide Lines

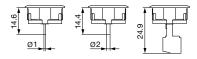
Identification	Details	Initiator	Description
RoHS	RoHS	SCHURTER AG	Directive RoHS 2011/65/EU, Amendment (EU) 2015/863
REACH	REACH	SCHURTER AG	On 1 June 2007, Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals 1 (abbreviated as "REACH") entered into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

## Dimension [mm]

MCS 19



## MCS 19 Connection Versions

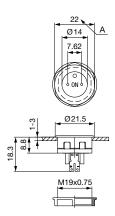


Drawing 1: Pins

Drawing 2: Pins with Soldering Aid

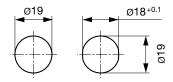
Drawing 3: Clip for Pins

#### MCS 19 PI



Legend:
Zinc Die Casting Version:
x = 1 mm without sealing ring
x = 2 mm with sealing ring
Stainless Steel Version:
x = 1 mm without sealing ring
x = 1,7 mm with sealing ring

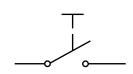
## Dimension

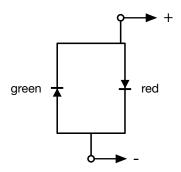


Drilling diagram

## **Diagrams**

MCS 19 PI Bi-colour-LED



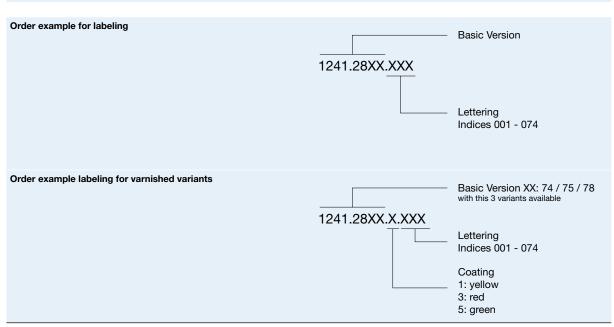


## **Point Illumination**

Operating Data	Forward Current max.	Forward Voltage at 10 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		3.8 VDC	4.5 VDC		
LED red/green	25 mA	2.0 VDC	2.5 VDC		
Attention: Switches are delivered without series resistor.					

#### Lettering





## **Lettering Colour of Laser Lettering**

Material	Lettering Colour	
Stainless Steel	black	Filled letters

## **Order Index Lettering**

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

## **All Variants**

Terminal	Contact	Housing Material	Actuator Material	Varnish	Illumination	Color LED	Config. Code	Order Number	
Pins	Ag	Zinc Diecasting	Zinc Diecasting	-	non-illuminated	-	MCS 19 Zinc	1241.2800	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Zinc Diecasting	-	non-illuminated	-	MCS 19 Zinc	1241.2801	
Screw terminal	Ag	Zinc Diecasting	Zinc Diecasting	-	non-illuminated	-	MCS 19 Zinc	1241.2802	
Pins	Ag	Zinc Diecasting	Stainless Steel	-	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2805	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2806	
Screw terminal	Ag	Zinc Diecasting	Stainless Steel	-	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2807	
Pins	Au	Zinc Diecasting	Zinc Diecasting	-	non-illuminated	-	MCS 19 Zinc	1241.2810	
Screw terminal	Au	Zinc Diecasting	Zinc Diecasting	-	non-illuminated	-	MCS 19 Zinc	1241.2812	
Pins	Au	Zinc Diecasting	Stainless Steel	-	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2815	
Screw terminal	Au	Zinc Diecasting	Stainless Steel	-	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2817	
Pins	Ag	Stainless Steel	Stainless Steel	-	non-illuminated	-	MCS 19 ES	1241.2820	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	non-illuminated	-	MCS 19 ES	1241.2821	
Screw terminal	Ag	Stainless Steel	Stainless Steel	-	non-illuminated	-	MCS 19 ES	1241.2822	
Screw terminal	Au	Stainless Steel	Stainless Steel	-	non-illuminated	-	MCS 19 ES	1241.2827	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	Point Illumination	red	MCS 19 PI	1241.2830	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	Point Illumination	green	MCS 19 PI	1241.2831	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	Point Illumination	yellow	MCS 19 PI	1241.2832	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	Point Illumination	red / green	MCS 19 PI	1241.2833	
Pins with Solde- ring Aid	Ag	Stainless Steel	Stainless Steel	-	Point Illumination	blue	MCS 19 PI	1241.2834	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	Point Illumination	red	MCS 19 PI	1241.2855	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	Point Illumination	green	MCS 19 PI	1241.2856	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	Point Illumination	yellow	MCS 19 PI	1241.2857	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	Point Illumination	red / green	MCS 19 PI	1241.2858	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	-	Point Illumination	blue	MCS 19 PI	1241.2859	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	Housing green	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2874.5	
Screw terminal	Ag	Zinc Diecasting	Stainless Steel	Housing yellow	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2875.1	
Pins with Solde- ring Aid	Ag	Zinc Diecasting	Stainless Steel	Actuator red	non-illuminated	-	MCS 19 Zinc/Stainless Steel	1241.2878.3	

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

Nut with gasket are enclosed in the box.

Most Popular.

 $Availability for all products can be searched real-time: \\https://www.schurter.com/en/Stock-Check/Stock-Check-SCHURTER$ 

20 in box with insert (20 pcs, with connecting terminal 10 pcs.) Packaging unit



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



- Actuating elements in ESD safe packaging
- Screw nuts and sealing rings in a bag (enclosd in the box)

## **Accessories**

#### Description



Connecting Terminal MCS Connecting Terminal

# **Mouser Electronics**

**Authorized Distributor** 

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

## Schurter:

 1241.2800
 1241.2858
 1241.2855
 1241.2856
 1241.2857
 1241.2801
 1241.2801
 1241.2805.071
 1241.2806.071

 1241.2807.071
 1241.2807.106
 1241.2812
 1241.2815.071
 1241.2817.071
 1241.2821
 1241.2822
 1241.2855.071

 1241.2856.071
 1241.2857.071
 1241.2858.071
 1241.2873.3
 1241.2874.3
 1241.2875.3
 1241.2877.3
 1241.2878.3

 1241.2878.5
 1241.2879.3
 1241.2802
 1241.2805
 1241.2806
 1241.2806.183
 1241.2807
 1241.2856.186

 1241.2858.151
 1241.2878.1
 1241.2859
 1241.2827
 1241.2806.164
 1241.281
 1241.282
 1241.2810
 1241.2820

 1241.2874.4