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# MCS 19

Metal Switch Short Stroke



MCS 19 painted green



MCS 19 actuator painted red



MCS 19 stainless steel

RoHS COMPLIANT

## 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

## Approvals

- EMC: EMC directive 2004/108/EWG

## 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 48 VDC, switching current 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
- 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, CE declaration of conformity, RoHS, CHINA-RoHS, e-Shop, CAD-Drawings, Product News, Detailed request for product

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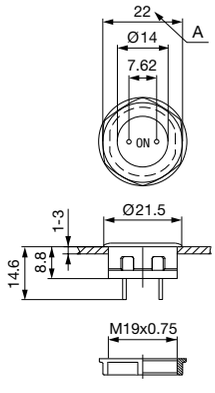
## Technical Data

| Electrical Data | |
|---|---|
| Supply Voltage | LED operating data are listed in separate 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 mΩ, < 150 mΩ after lifetime |
| Insulation Resistance | > 100 MΩ |
| Duration of Bounce | < 5 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 | < 5 ms |

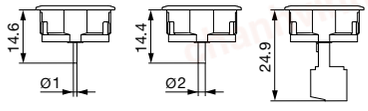
| Mechanical Data | |
|---|---|
| Actuating Force | 3.7 N |
| Actuating Travel | 0.4 mm, |
| Lifetime | 1 million actuations |
| Shock Protection | IK 05 , |
| Tightening Torque | 0.4 Nm with Sealing Ring, 1.5 Nm without Sealing Ring |
| **Climatical Data** | |
| Operating Temperature | -20 to +60 °C |
| Storage Temperature | -20 to +60 °C |
| IP-Protection | IP 65 Front Side Contact Area, IP 40 Front Side mechanical, |
| 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 68-2-20 Test Ta Method 1) |
| Resistance to Soldering Heat | 260 °C / 5 sec (IEC 68-2-20 Test Tb Method 1A) |
| **Material** | |
| Housing | Stainless Steel 1.4305 / Zinc Die Casting 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 |

## Dimension

MCS 19




MCS 19 Connection Versions




Drawing 1: Pins
Drawing 2: Pins with Soldering Aid
Drawing 3: Clip for Pins

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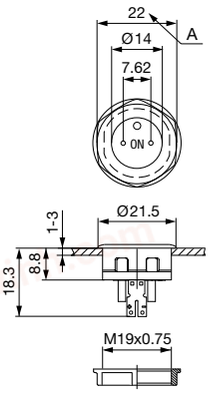
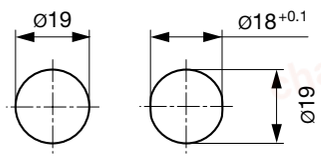
MCS 19 PI



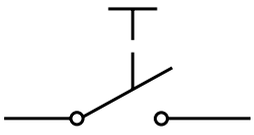

Legend:
Zinc Die Casting Version:
x = 1 mm without sealing ring
x = 2 mm with sealing ring
Stainless Steel Version:
x = 1 mm without sealing ring
x = 1,7 mm with sealing ring

## Dimension

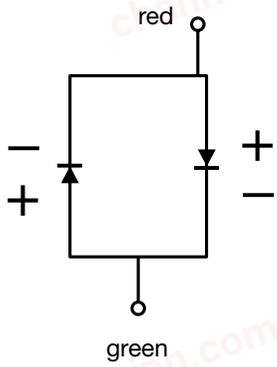



Drilling diagram

## 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. | | | |

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[nicht konfiguriert]:
element_name:Beschriftung_MCS_19_
ES: id:170327

## Lettering

| | |
|---|---|
| Die letzten drei | |
| 000 | keine Beschriftung |
| 001-074 | Standardbeschrif- |
| 101- | kundenspezifische |

**Bestellbeispiel**

## 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

| Terminal | Kontakte | Housing Material | Actuator Material | Lettering | Illumination | Color LED | Config. Code | Bestellnummer |
|---|---|---|---|---|---|---|---|---|
| Pins | Ag | Zinc Diecasting | Zinc Diecasting | without Lettering | non-illuminated | - | MCS 19 Zinc | 1241.2800 |
| Pins with Solder-ring Aid | Ag | Zinc Diecasting | Zinc Diecasting | without Lettering | non-illuminated | - | MCS 19 Zinc | 1241.2801 |
| Clip for Pins | Ag | Zinc Diecasting | Zinc Diecasting | without Lettering | non-illuminated | - | MCS 19 Zinc | 1241.2802 |
| Pins | Ag | Zinc Diecasting | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2805 |
| Pins | Ag | Zinc Diecasting | Stainless Steel | with Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2805.057 |
| Pins with Solder-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2806 |
| Clip for Pins | Ag | Zinc Diecasting | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2807 |
| Pins | Au | Zinc Diecasting | Zinc Diecasting | without Lettering | non-illuminated | - | MCS 19 Zinc | 1241.2810 |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Clip for Pins | Au | Zinc Diecasting | Zinc Diecasting | without Lettering | non-illuminated | - | MCS 19 Zinc | 1241.2812 |
| Pins | Au | Zinc Diecasting | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2815 |
| Clip for Pins | Au | Zinc Diecasting | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Zinc/Stainless Steel | 1241.2817 |
| Pins | Ag | Stainless Steel | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Stainless Steel | 1241.2820 |
| Pins with Solde-ring Aid | Ag | Stainless Steel | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Stainless Steel | 1241.2821 |
| Clip for Pins | Ag | Stainless Steel | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Stainless Steel | 1241.2822 |
| Clip for Pins | Au | Stainless Steel | Stainless Steel | without Lettering | non-illuminated | - | MCS 19 Stainless Steel | 1241.2827 |
| Pins with Solde-ring Aid | Ag | Stainless Steel | Stainless Steel | without Lettering | Point Illumination | red | MCS 19 PI | 1241.2830 |
| Pins with Solde-ring Aid | Ag | Stainless Steel | Stainless Steel | without Lettering | Point Illumination | green | MCS 19 PI | 1241.2831 |
| Pins with Solde-ring Aid | Ag | Stainless Steel | Stainless Steel | without Lettering | Point Illumination | red / green | MCS 19 PI | 1241.2833 |
| Pins with Solde-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | Point Illumination | red | MCS 19 PI | 1241.2855 |
| Pins with Solde-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | Point Illumination | green | MCS 19 PI | 1241.2856 |
| Pins with Solde-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | Point Illumination | yellow | MCS 19 PI | 1241.2857 |
| Pins with Solde-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | Point Illumination | red / green | MCS 19 PI | 1241.2858 |
| Pins with Solde-ring Aid | Ag | Zinc Diecasting | Stainless Steel | without Lettering | Point Illumination | blue | MCS 19 PIPI | 1241.2859 |

Order numbers MCS 19, varnished versions (Colour of the switch housing or the actuator): 1241.28xx.A => A = 1 (yellow) / 3 (red) / 5 (green)
xx = 70 standard pins, 71 Soldering aid, 72 Screw connection with varnished housing die cast / actuator die cast
xx = 73 standard pins, 74 soldering aid, 75 screw connection with varnished housing die cast / actuator stainless steel
xx = 77 standard pins, 78 soldering aid, 79 screw connection with varnished actuator stainless steel / housing die cast
Order numbers MCS 19, illuminated versions (Point Illumination): 1241.2876.A.XXX.B and respectively 1241.2880.A.XXX.B => B = 1 (red) / 2 (green) / 3 (yellow) / 4 (blue) / 5 (red-green)

For Lettering versions see tables "Lettering" and "Order Index Lettering" to determine the symbol

Plastic nut with gasket are enclosed in the box.

Most Popular.

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

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



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



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

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## Accessories

| | Description |
|---|---|
|  | Connecting Terminal MCS 19<br>Connecting Terminal |

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14.01.2015



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.