### Capacitive switch



Ring illumination green



**CPS** Area illumination red



Ring illumination blue

## See below:

### **Approvals and Compliances**

### **Description**

- Capacitive touch sensor as momentary push button (NO or NC) or as latching switch (LA)
- Protection against unintended switching
- Multicolor illumination
- Potential free output contacts
- Laser lettering possible
- Vandal resistant
- Wires (8 wires for Multicolor, 4 wires otherwise)2; 26AWG, 0.128 mm2

## **Unique Selling Proposition**

- Variable supply voltage
- Constant LED intensity
- Inputs protected against overvoltage
- Galvanic separated outputs

## **Characteristics**

- Housing made from stainless steel
- Various illumination colors and color combinations possible
- Touch surface made from scratch-resistant ceramics with area illumination or made from stainless steel with ring illumination
- Ring or area illumination
- Wearless, no moving parts
- Attractive design with or without finger guide available

#### Weblinks

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

#### Important information

- The CPS is not suitable for use in sanitary or other applications exposed to water or other liquids.
- The housing is connected to gnd.

## **Technical Data**

Electrical Data	
Switching Function	momentary (NO1) or latching
Switching Voltage	max. 42 VAC / 60 VDC
Switching current	max. 100 mA
Electrical Rating	1 W
Switch Resistance OFF	> 10 MΩ
Switch Resistance ON	< 16Ω
Supply Voltage	5 - 28 VDC
Current Consumption all LEDs off	2.5 mA (switch is open)
	8.5 mA (switch is closed)
Current Consumption Ilumination red, green or blue	8.0 mA (switch is open)
	14.0 mA (switch is closed)
Current Consumption Illumination yellow, cyan or magenta	14.0 mA (switch is open)
	20.0 mA (switch is closed)
Current Consumption 3 LED on	19.0 mA (switch is open)
	25.0 mA (switch is closed)
Reverse Polarity Protection	yes
Short Circuit Protection	yes
Output	OptoMOS Relay
Lifetime	5 million actuations
Connection type	Wires (8 wires for Multicolor, 4 wires otherwise) <sup>2</sup> ; 26AWG, 0.128 mm <sup>2</sup>

Mechanical Data	
Actuation Type	capacitive
Actuating Force	none
Shock Protection	IK09
Mounting Depth	with Finger Guide: 30.3 mm
	without Finger Guide: 30 mm
Tightening Torque Plastic Nut	2.5 Nm
Climatical Data	
Operating Temperature	-40 to 60 °C
Storage Temperature	-40 to 85 °C
IP Protection Class Front Side	IP67 acc. to IEC 60529
Salt Spray Test (acc. to DIN 50021-SS)	24 h / 48 h / 96 h Residence Time
Material	
Housing	Stainless Steel
Actuator	Area Illumination: Ceramics
	Ring Illumination: Stainless steel
Illuminated Ring (Ring Illumination)	PMMA
Seal Ring	NBR70

## **Approvals and Compliances**

<sup>&</sup>lt;sup>1</sup> on request also available as NC / <sup>2</sup> on request also available with cable or connector

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.

#### **Product standards**

Product standards that are referenced

Organization	Design	Standard	Description
<u>IEC</u>	Designed according to	IEC 61000-6-1	Switches for appliances. Part 1. General requirements

#### **Application standards**

Application standards where the product can be used

Organization	Design	Standard	Description
<u>IEC</u>	Suitable for applications acc.	IEC/UL 62368-1	Audio/video, information and communication technology equipment - Part 1: Safety requirements

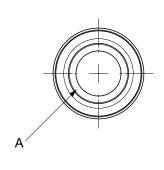
### Compliances

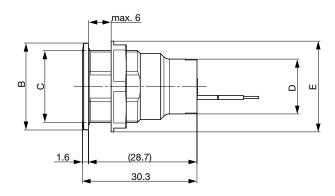
The product complies with following Guide Lines

Identification	Details	Initiator	Description
C€	CE declaration of conformity	SCHURTER AG	The CE marking declares that the product complies with the applicable requirements laid down in the harmonisation of Community legislation on its affixing in accordance with EU Regulation 765/2008.
UK CA	UKCA declaration of conformity	SCHURTER AG	The UKCA marking declares that the product complies with the applicable requirements laid down in the British Amendment of Regulation (EC) 765/2008.
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.

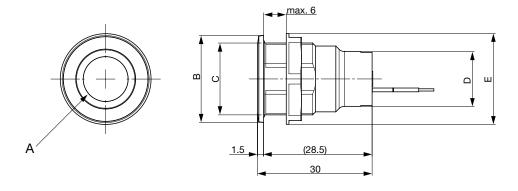
## Dimension [mm]

CPS with ring illuminating, with finger guide

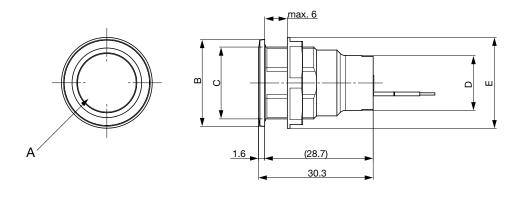




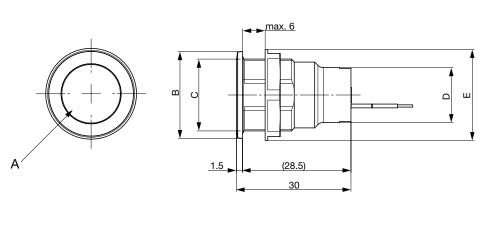
## CPS with ring illuminating, no finger guide



## CPS with area illuminating, with finger guide



## CPS with area illuminating, no finger guide



A= illuminating area B= CPS16: 19.5mm

C= CPS16: M16x1 D= CPS16: 14.7mm

E= CPS16: ø20mm

CPS19: 23.0mm CPS19: M19x0.75

CPS19: 14.5mm CPS19: ø24mm

CPS22: 25.5mm

CPS22: M22x1 CPS22: 14.5mm

CPS22: ø27.6mm

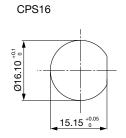
## For multicolor configurations

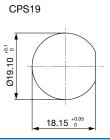
Connection wire assignment							
Wire-number	Wire color	function					
Wire 1	brown	Vin = 5 VDC28 VDC					
Wire 2	black	GND					
Wire 3	white	OUT1					
Wire 4	white	OUT2					
		LED red					
Wire 5	red	GND = ON					
		Open* = OFF					
		LED green					
Wire 6	green	GND = ON					
		Open* = OFF					
		LED blue					
Wire 7	blue	GND = ON					
		Open* = OFF					
Wire 8 black GND							

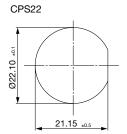
## For all other configurations

Connection wire assignment								
Wire-number Wire color function								
Wire 1	brown	Vin = 5 VDC28 VDC						
Wire 2 black		GND						
Wire 3	white	OUT1						
Wire 4	OUT2							

### **Dimension**

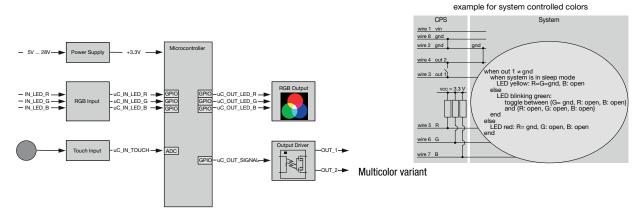






 $<sup>^{\</sup>star}$  internal pull-up resistor to vcc = 3.3 V

## **Diagrams**



## Illumination options for RGB

Lighting type	Wire red	Wire green	Wire blue	Resulting Color
Multicolor Singlecolor	x			Red 🛑
Multicolor Singlecolor		х		Green 🛑
Multicolor Singlecolor			x	Blue
Multicolor RGB Additive 2	х	х		Yellow —
Multicolor RGB Additive 2	х		x	Magenta 🛑
Multicolor RGB Additive 2		х	x	Cyan 🔵
Multicolor RGB Additive 3	х	х	х	White 🔘

## **Lettering Colour of Laser Lettering**

Material	Lettering Colour			
Stainless Steel	black Filled letters			
Ceramic	black	Filled letters		

## Order number key

C P S - 19 - MO NO	) A10	F0 - RI	RGB V	AR F0 - S0 NC B - S0 NC WF 1 074 - C
1 2 3	4	5 6	7	8 9 10 11 12 13 14
Diameter		Q	1	Supply voltage 8
19 mm	=	19		illumination
22 mm	=	22		None = 000 5-28V = VAR
Switch type		Q <sub>a</sub>	2	
Latching	=	LA		Terminal illumination 9
Momentary	=	MO		Flexible wires = F0
Switch function		Q	3	Housing material and color \( \mathbb{Q} \) 10
Normally open Normally close	=	NO NC		Stainless steel 1.4305 (Silver) = S0 NC
Normally close	=	NO		Actuator material 9 11
Rated current		Q	4	Stainless steel 1.4305 (Silver) = S0 NC
100 mA	=	<b>A</b> 10		Ceramic (White) = CO WT
				(only with stainless steel)
Terminal switch		Q <sub>a</sub>	5	
Flexible wires	=	F0		Actuator style 4 12
				Finger guided = WF
Illumination		Q <sub>3</sub>	6	No Finger guided = NF
No illumination	=	00		
Area illumination	=	AI		Marking type 4 13
Ring illumination	=	RI		None = 000
Illumination / Color		Q	7	Laser lettering = 1 Lettering symbol
None	=	000	- /	STOP = 057
Red	=	0RD		ON = 065
Green	=	0GN		OFF = 066
Blue	=	0BL		ON/OFF = 071
Blue / Red	=	0YL		START = 072
Red / Green	=	0RG		<u></u> = 074
Multicolor	=	RGB		= 075
				<ul> <li>□ = 074</li> <li>□ = 075</li> <li>□ = 076</li> <li>□ = 077</li> </ul>
				① = 077  further lettering on request
				Accessories 4 14
				Hex nut plastic = C
				Hex nut stainless steel on request

## **Variants**

Diameter [mm]	Illumination	Illumination Color active / inactive	Finger Guide	Function	Actuator Material	Accessories	Order Number
16	Area illumination	red / green	with	latching	Ceramics	Hexagon nut	3-101-398
16	Area illumination	multicolor	without	latching	Ceramics	Hexagon nut	3-101-394
16	Area illumination	red / green	without	latching	Ceramics	Hexagon nut	3-101-395
16	Ring Illumination	red / green	with	latching	Stainless Steel	Hexagon nut	3-101-413
16	Ring Illumination	multicolor	without	latching	Stainless Steel	Hexagon nut	3-101-400
16	Ring Illumination	red / green	without	latching	Stainless Steel	Hexagon nut	3-101-401
16	Area illumination	multicolor	with	momentary (NO)	Ceramics	Hexagon nut	3-101-397
16	Area illumination	multicolor	without	momentary (NO)	Ceramics	Hexagon nut	3-101-403
16	Ring Illumination	multicolor	with	momentary (NO)	Stainless Steel	Hexagon nut	3-101-412
16	Ring Illumination	multicolor	without	momentary (NO)	Stainless Steel	Hexagon nut	3-101-399
19	Area illumination	red / green	with	latching	Ceramics	Hexagon nut	3-101-418
19	Area illumination	multicolor	without	latching	Ceramics	Hexagon nut	3-101-415
19	Area illumination	red / green	without	latching	Ceramics	Hexagon nut	3-101-416
19	Ring Illumination	red / green	with	latching	Stainless Steel	Hexagon nut	3-101-423
19	Ring Illumination	multicolor	without	latching	Stainless Steel	Hexagon nut	3-101-420
19	Ring Illumination	red / green	without	latching	Stainless Steel	Hexagon nut	3-101-421
19	Area illumination	multicolor	with	momentary (NO)	Ceramics	Hexagon nut	3-101-417
19	Area illumination	multicolor	without	momentary (NO)	Ceramics	Hexagon nut	3-101-414
19	Ring Illumination	multicolor	with	momentary (NO)	Stainless Steel	Hexagon nut	3-101-422
19	Ring Illumination	multicolor	without	momentary (NO)	Stainless Steel	Hexagon nut	3-101-419
22	Area illumination	red / green	with	latching	Ceramics	Hexagon nut	3-101-428
22	Area illumination	multicolor	without	latching	Ceramics	Hexagon nut	3-101-425
22	Area illumination	red / green	without	latching	Ceramics	Hexagon nut	3-101-426
22	Ring Illumination	red / green	with	latching	Stainless Steel	Hexagon nut	3-101-405
22	Ring Illumination	multicolor	without	latching	Stainless Steel	Hexagon nut	3-101-430
22	Ring Illumination	red / green	without	latching	Stainless Steel	Hexagon nut	3-101-431
22	Area illumination	multicolor	with	momentary (NO)	Ceramics	Hexagon nut	3-101-427
22	Area illumination	multicolor	without	momentary (NO)	Ceramics	Hexagon nut	3-101-424
22	Ring Illumination	multicolor	with	momentary (NO)	Stainless Steel	Hexagon nut	3-101-404
22	Ring Illumination	multicolor	without	momentary (NO)	Stainless Steel	Hexagon nut	3-101-429

Common parameters for all standard variants:

- Housing material: stainless steel
- Switching current: 100 mA Illumination supply voltage: 5 V 28 V (variable) IP protection: IP67- IK protection: IK09
- Terminal connection: wires (8 wires for RGB, 4 wires otherwise), standard wire length is 200 mm

Latching and momentary NO switch are open after power-up (protection against unintended switching) NO: normaly open

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

Minimum order quantity for standard variants with or without laser marking is 20 pieces.

Configurations which are not listed as standard in the table above can be requested as customized variants. The configuration code can be used for customizing this product. Please contact us in case more detail information is needed.

Packaging unit

10 Pcs

**Switches** 

# **Mouser Electronics**

**Authorized Distributor** 

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

Schurter:

3-110-090