



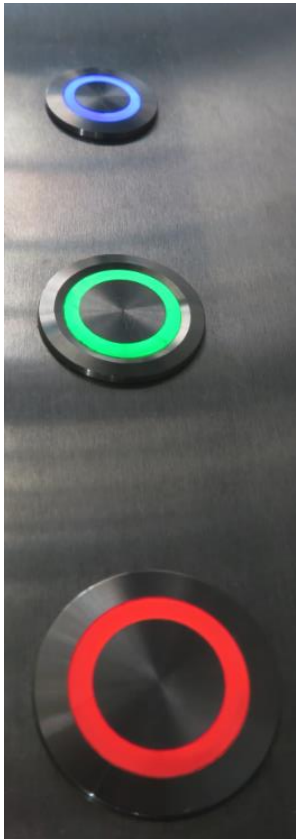
CPS - Capacitive Switch

Metal Line Switch with Capacitive Sensor Technology



- Uses capacitive touch sensor technology
- No moving parts eliminates wear and tear
- The portfolio offers 3 different mounting sizes (16 mm, 19 mm, 22 mm)
- Variable supply voltage (is also supply voltage for the LED)
- Many customized options
- Actuator-area with or without finger guide
- Ring or area illumination
- Various colors and color combinations possible
- Momentary (NO or NC) or latching
- Latching type is open after power-up (protects against unintended switch-on)





- Pre-configured standard variants available for easy use
- Multicolor variant for full flexibility to define the illumination color out of 7 possible colors
- Potential-free switch terminals
- Reverse voltage protection
- Vandal resistant
- Standard and customer laser markings available

Note: The CPS is not suitable for applications which are exposed to environments with water or other fluids as it can trigger unintended switching activities.



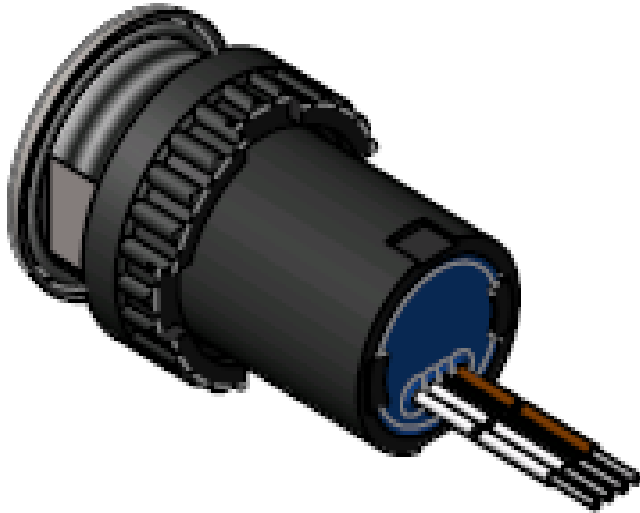
- Available diameters: 16 mm, 19 mm or 22 mm
- Housing: stainless steel
- Actuator:
 - Stainless steel for ring illumination
 - Ceramics for area illumination
- Supply voltage between 5 V and 28 V
- Switching voltage: max. 42 VAC / 60 VDC
- Switching current: max. 100 mA
- IK protection: IK09
- IP protection: IP67
- Connection terminals:
 - 8 wires for multicolor variant
 - 4 wires for all others
- Operating temperature: -20 °C - +60 °C



Other options are available on request

- Pre-configured standard variants:
The illumination colors are preset. No wiring by the customer is necessary. The color changes to indicate switching state are automatically set upon switch installation.
- Multicolor standard variant:
The customer can set colors and can define color changes with or independent of switching action. The customer can chose from 7 colors
- Naming conventions:
 - A switch is either **open** or **closed**
 - An LED is either **on** or **off**
 - «**active color**» is the color of the illumination when the switch is activated by a finger touch
 - «**inactive color**» is the color of the illumination at power-up or when the switch is not activated
 - An activated switch is closed if it is an NO-type or open if it is an NC-type



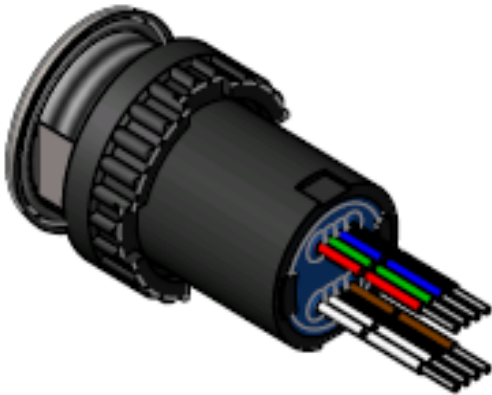


Connections:

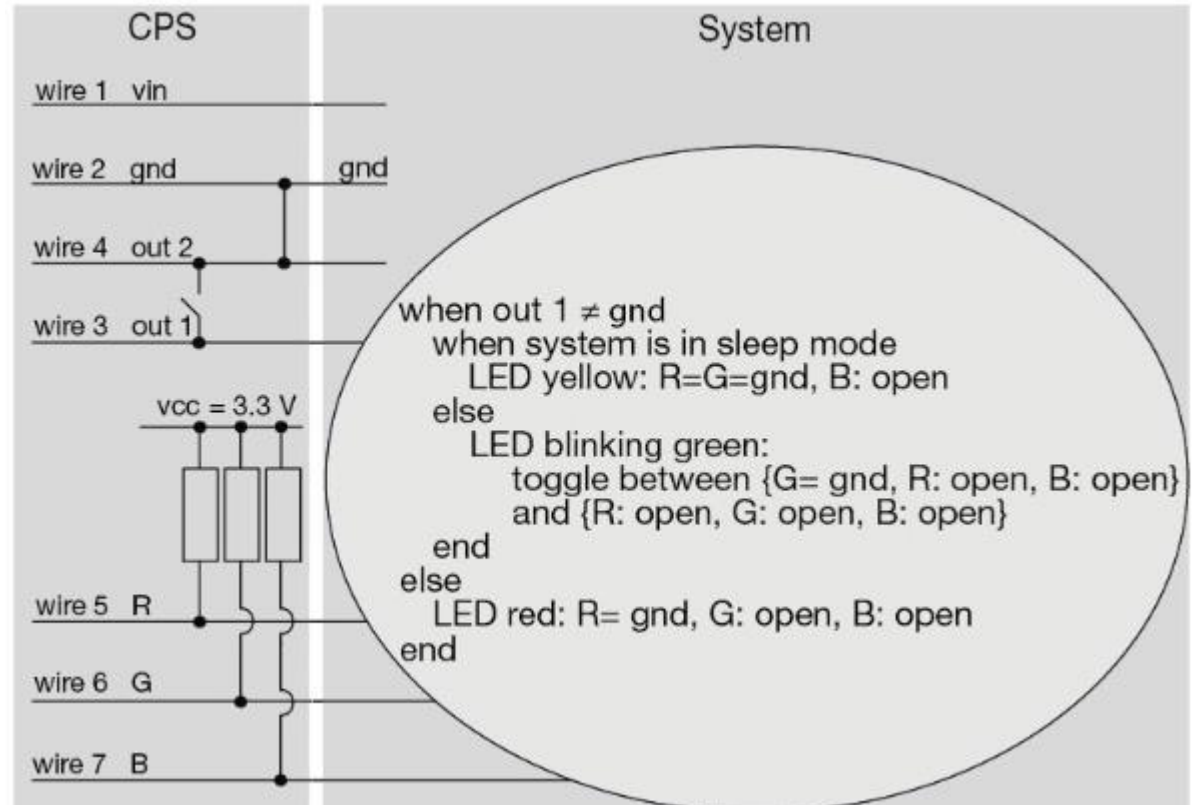
wire	wire color	function
wire 1	brown	vin = 5 - 28 VDC
wire 2	black	gnd
wire 3	white	out1
wire 4	white	out2

1. The pre-configured standard variants (single or bicolor) are easy to implement into a system
2. The state of the switch is visible via different colors:
 - «**inactive-color**» when powering up the switch or the switch is not activated. The inactive-color for the single color variant is no illumination.
 - «**active-color**» when the switch is activated by a finger tip
3. The active and inactive color are the colors which are coded in the configuration code (see slide “Configuration code”)

Application example for a more complex color illumination made from the multicolor variant.



wire	wire color	function
wire 1	brown	vin = 5 - 28 VDC
wire 2	black	gnd
wire 3	white	out1
wire 4	white	out2
wire 5 *)	red	LED red
wire 6 *)	green	LED green
wire 7 *)	blue	LED blue
wire 8	black	gnd



*) Wires 5, 6, and 7 are internally connected to vcc = 3.3 VDC via a pull-up resistor.

Strategic Positioning

- Premium product
- Follows the most recent technology trend for push buttons
- Leading position with respect to high degree of selection versatility of illumination color configuration
- Alternative product for the PSE piezo switch series for applications, provides for touch (not pressure) actuation in water-protected environments

Competitors

- Apem
- RAFI
- Captron
- XECRO

Price Position

- Premium pricing based on vandal proof design made from high quality materials

Applications

- Industrial machinery
- Vending machines, ticket machines
- Laboratory equipment
- Professional and home electronic equipment (coffee machines, multi-function kitchen machines, white goods, etc.)
- Food processing
- Door opening and access control systems
- Elevators
- Chemical industry

USP (Customer Focus)

- Variable supply voltage
- Constant LED intensity
- Inputs protected against overvoltage
- Galvanic separated outputs
- High quality material (scratch free ceramics actuator and stainless steel)
- Many illumination color combinations possible
- Fulfills today's expectations on input elements like it is known from mobiles, tablets, etc.

Attribute	MSM	PSE	CPS
Technology	mechanical	piezo	capacitive
Momentary switch signal voltage	x	x	x
Latching switch signal voltage	x		x
Power switch	x		
Power momentary switch	x		
Diameter	16,19,22,27,30	16,19,22,27,30	16,19,22
Surface or ring illumination from diameter	19 mm	22 mm	16 mm
Multicolor illumination		x	x
Illumination types	None, point, ring, area	None, point, ring	Ring, area
Required force for a switching operation	4.5 N	< 3 N	none
Functions	LA, NO	NO, IV	LA, NO, NC
Impact of water	Low	None	High (switches)
IP protection class for illumination	IP40	IP67 / IP69K	IP67
IK protection class	IK07	IK02	IK09

Order information for pre-configured products

Diameter	Function	Actuator Material	Finger Guide	Illumination Type	Illumination Color active / inactive	Accessoires	Configuration Code	Order Number
16	latching	Ceramics	without	Area illumination	red / green	Knurled nut	CPS16-LA00A10-SNCCWTFN-AIORGVAR-W0000-S+00B0AAAAFBA0	3-101-395
16	latching	Ceramics	without	Area illumination	multicolor	Knurled nut	CPS16-LA00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-394
16	latching	Ceramics	with	Area illumination	red / green	Knurled nut	CPS16-LA00A10-SNCCWTF-AIORGVAR-W0000-S+00B0AAAAFBA0	3-101-398
16	latching	Stainless steel	without	Ring illumination	red / green	Knurled nut	CPS16-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFBA0	3-101-401
16	latching	Stainless steel	without	Ring illumination	multicolor	Knurled nut	CPS16-LA00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-400
16	latching	Stainless steel	with	Ring illumination	red / green	Knurled nut	CPS16-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFBA0	3-101-413
16	momentary, NO	Ceramics	without	Area illumination	multicolor	Knurled nut	CPS16-NO00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-403
16	momentary, NO	Ceramics	with	Area illumination	multicolor	Knurled nut	CPS16-NO00A10-SNCCWTF-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-397
16	momentary, NO	Stainless steel	without	Ring illumination	multicolor	Knurled nut	CPS16-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-399
16	momentary, NO	Stainless steel	with	Ring illumination	multicolor	Knurled nut	CPS16-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-412
19	latching	Ceramics	without	Area illumination	red / green	Hexnut	CPS19-LA00A10-SNCCWTFN-AIORGVAR-W0000-S+00B0AAAAFCA0	3-101-416
19	latching	Ceramics	without	Area illumination	multicolor	Hexnut	CPS19-LA00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-415
19	latching	Ceramics	with	Area illumination	red / green	Hexnut	CPS19-LA00A10-SNCCWTF-AIORGVAR-W0000-S+00B0AAAAFCA0	3-101-418
19	latching	Stainless steel	without	Ring illumination	red / green	Hexnut	CPS19-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFCA0	3-101-421
19	latching	Stainless steel	without	Ring illumination	multicolor	Hexnut	CPS19-LA00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-420
19	latching	Stainless steel	with	Ring illumination	red / green	Hexnut	CPS19-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFCA0	3-101-423
19	momentary, NO	Ceramics	without	Area illumination	multicolor	Hexnut	CPS19-NO00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-414
19	momentary, NO	Ceramics	with	Area illumination	multicolor	Hexnut	CPS19-NO00A10-SNCCWTF-AIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-417
19	momentary, NO	Stainless steel	without	Ring illumination	multicolor	Hexnut	CPS19-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-419
19	momentary, NO	Stainless steel	with	Ring illumination	multicolor	Hexnut	CPS19-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFCA0	3-101-422
22	latching	Ceramics	without	Area illumination	red / green	Knurled nut	CPS22-LA00A10-SNCCWTFN-AIORGVAR-W0000-S+00B0AAAAFBA0	3-101-426
22	latching	Ceramics	without	Area illumination	multicolor	Knurled nut	CPS22-LA00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-425
22	latching	Ceramics	with	Area illumination	red / green	Knurled nut	CPS22-LA00A10-SNCCWTF-AIORGVAR-W0000-S+00B0AAAAFBA0	3-101-428
22	latching	Stainless steel	without	Ring illumination	red / green	Knurled nut	CPS22-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFBA0	3-101-431
22	latching	Stainless steel	without	Ring illumination	multicolor	Knurled nut	CPS22-LA00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-430
22	latching	Stainless steel	with	Ring illumination	red / green	Knurled nut	CPS22-LA00A10-SNCSNCF-RIORGVAR-W0000-S+00B0AAAAFBA0	3-101-405
22	momentary, NO	Ceramics	without	Area illumination	multicolor	Knurled nut	CPS22-NO00A10-SNCCWTFN-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-424
22	momentary, NO	Ceramics	with	Area illumination	multicolor	Knurled nut	CPS22-NO00A10-SNCCWTF-AIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-427
22	momentary, NO	Stainless steel	without	Ring illumination	multicolor	Knurled nut	CPS22-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-429
22	momentary, NO	Stainless steel	with	Ring illumination	multicolor	Knurled nut	CPS22-NO00A10-SNCSNCF-RIRGBVAR-W0000-S+00B0AAAAFBA0	3-101-404

Legend

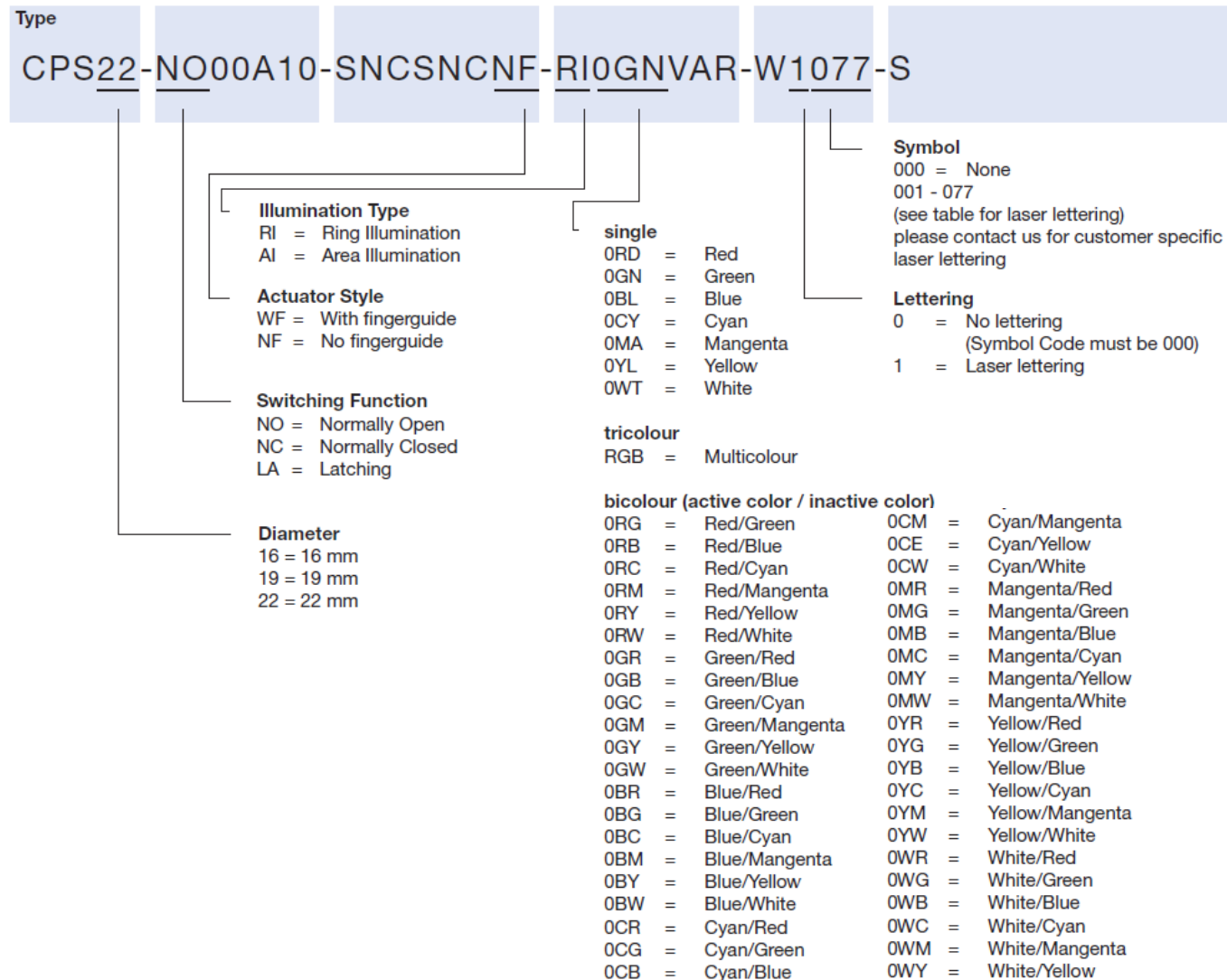
NO: normally open

Note: latching type is open after power-up

Common for all variants:

- housing material: stainless steel
- switching current: 100 mA
- supply voltage (DC): 5 V - 28 V
- IP protection: IP67
- IK protection: IK07
- connection terminals: wires (8 wires for multicolor, 4 wires for all others)
- standard wire length is 200 mm

The configuration code can be used as the basis for ordering customized products:



Start at the table of variants on the main html page of the product. Detailed information which will help to differentiate the variants can be found by clicking on the three dots in the last column of the variant table next to the «Distributor Stock Check». A pop-up window will open to show the variant list with the complete information.

Durchmesser [mm]	Beleuchtung	Beleuchtungsfarbe aktive / inaktive	Bestellnummer	A=Oft bestellt	Gratismuster	Distributor Stock Check	...
(all)	(all)	(all)					
(all)	(all)	(all)					
16	AI	rot / grün	3-101-395				...
16	AI	Multicolor	3-101-394				...
16	AI	rot / grün	3-101-398				...

click one of these
“...” to open the
pop-up window

Availability

- Finished products can be ordered from stock.
- In addition, there are semi-finished products on stock which can be finished and are available for shipping within a short time.

Delivery Information

- A packing unit consists of 10 CPS switches packed into an ESD safe bag. The nuts and O-rings are packed into separate bags and are delivered in the same carton.



Additional Information

- Data Sheet CPS
- Website enables quick access to sales and marketing materials
- Click on [Partner Services](#) to download:
 - Latest press releases
 - Training presentations
 - Price lists
 - High and low resolution product photos
- Samples can be ordered from the standard product inventory

Technical Assistance

- For general product questions, contact your Inside Sales Representative.