CP series

Capacitive switches

Distinctive features and specifications

❑ **Activated by the touch of a finger**
Even with surgeon gloves

❑ **50 million cycles**

❑ **Auto-calibration function**

❑ **Bushing diameter 16, 19 or 22 mm**

❑ **Momentary or latching**

ENVIRONMENTAL SPECIFICATIONS

- Sealing : IP68 and IP69K according to IEC 60529
- Triggered by flowing water
- Impact resistance : IK10
- Operating temperature : -20°C to +65°C
- ESD : complies with EN61000-4-2 (extended) ± 8KV (20 contacts) and ± 15KV (20 air discharges)

ELECTRICAL AND GENERAL SPECIFICATIONS

- Max. current/voltage rating : 200mA 24VDC
- Supply voltage : 5VDC, 12VDC or 24VDC
- Life expectancy : 50 million cycles
- Power consumption non-illuminated : 7mA
- Power consumption illuminated : 25mA
- Operating force : 0N
- LED state for output image option :
  1 LED : the LED is ON when the output is closed.
  2 LEDs : first colour is ON when the output is open. Second colour is ON when the output is closed.
- Output type : NPN

MATERIALS

- Case : aluminium, anodized
- Multi-wire leads section 0,22 mm^2 length 300 mm
- Cable, length 300 mm, section depending on switch model
- Connector : HE14 6V compatible with AMP/TYCO281839-3

ADJUSTABLE SENSITIVITY

Connection to ground by means of the yellow wire increases sensitivity (momentary version only).

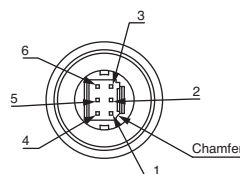⚠ This switch should not be used in safety applications.

Wiring diagrams

	Non-illuminated	1 LED		2 LEDs		Legend
		Output indicator	Independent	Output indicator	Independent	
OFF-ON	R W / Black	R W / Black	R W / G Black	R W / Black	R W / Blue G Black	R red +V
OFF-MOM	R Y W / Black	R Y W / Black	R Y W / G Black	R Y W / Black	R Y W / Blue G Black	

Legend

R red +V
Black black GND
W white output
Y yellow sensitivity
G green -LED 1
Blue blue -LED2

Wire colours may vary. Always refer to the label on the switch.
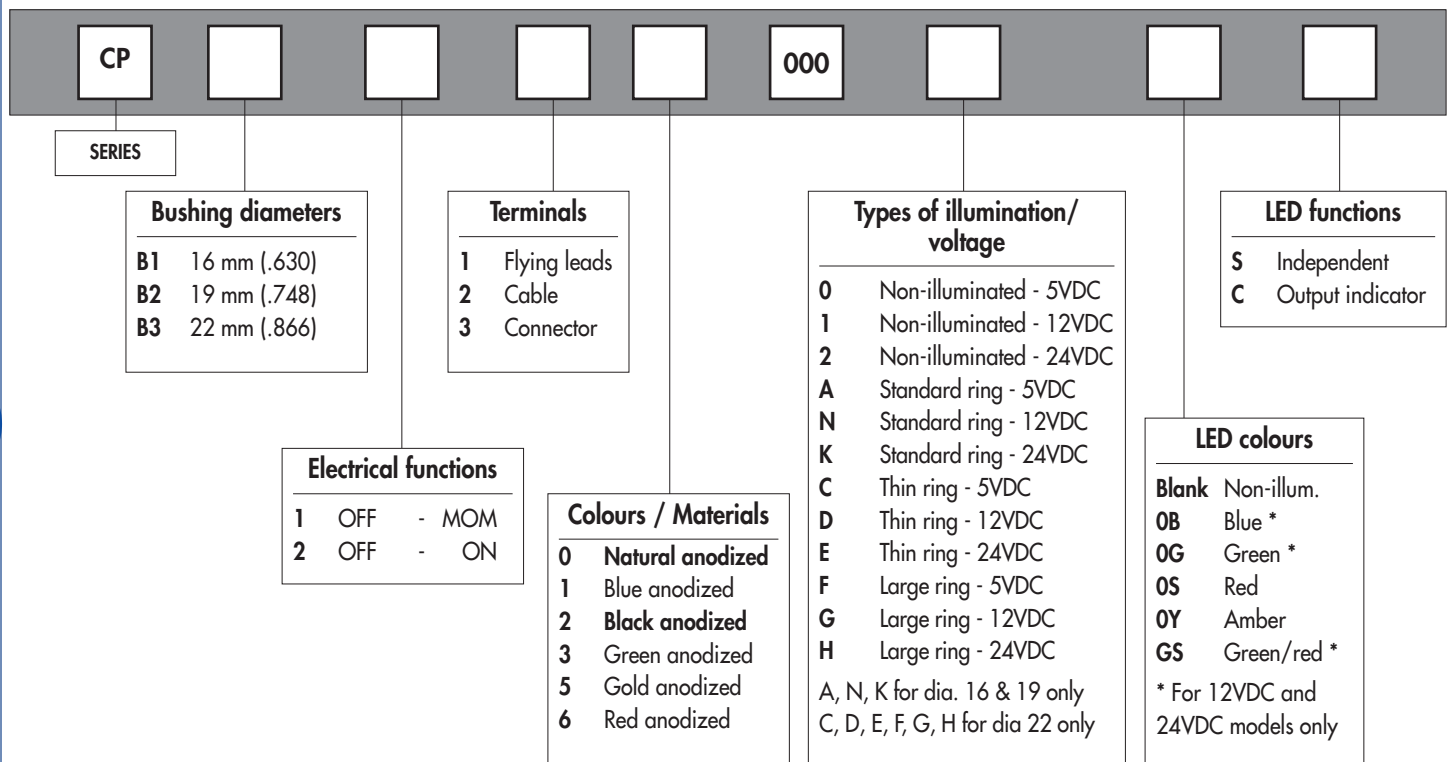
Wiring for switch connector

Pin 1 : GND   Pin 4 : LED 2
Pin 2 : output   Pin 5 : sensitivity
Pin 3 : +V   Pin 6 : LED 1

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Overview

| CP | | | | | | 000 | | | |

SERIES

Bushing diameters

B1	16 mm (.630)
B2	19 mm (.748)
B3	22 mm (.866)

Terminals

1	Flying leads
2	Cable
3	Connector

Types of illumination/voltage

0	Non-illuminated - 5VDC
1	Non-illuminated - 12VDC
2	Non-illuminated - 24VDC
A	Standard ring - 5VDC
N	Standard ring - 12VDC
K	Standard ring - 24VDC
C	Thin ring - 5VDC
D	Thin ring - 12VDC
E	Thin ring - 24VDC
F	Large ring - 5VDC
G	Large ring - 12VDC
H	Large ring - 24VDC

A, N, K for dia. 16 & 19 only
C, D, E, F, G, H for dia 22 only

LED functions

| S | Independent |
| C | Output indicator |

Electrical functions

| 1 | OFF | - | MOM |
| 2 | OFF | - | ON |

Colours / Materials

0	Natural anodized
1	Blue anodized
2	Black anodized
3	Green anodized
5	Gold anodized
6	Red anodized

LED colours

Blank	Non-illum.
0B	Blue *
0G	Green *
0S	Red
0Y	Amber
GS	Green/red *

* For 12VDC and
24VDC models only

B2

On request

- *Duration of activation 15 minutes for latching models (standard duration is infinite)*
- *Different lengths, gauges or colours for flying lead terminals*
- *Different cable lengths*

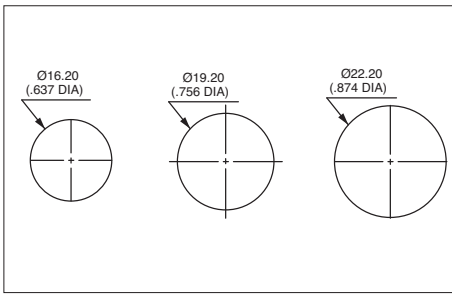**Dimensions** : first dimensions are in mm while inches are shown as bracketed numbers.

⚠ NOTICE : please note that not all combinations of above numbers are available.
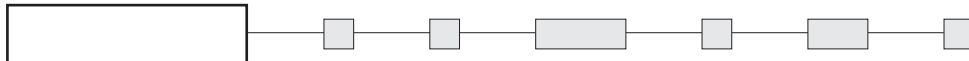Refer to the following pages for further information.

Packaging unit : 20 pieces

Ø16.20 (.637 DIA)   Ø19.20 (.756 DIA)   Ø22.20 (.874 DIA)

Shown with flying lead terminals

MODEL STRUCTURE

B2

Bushing Ø 16 mm (.630) - standard ring

Momentary **CPB11**   OFF   -   MOM

Latching **CPB12**   OFF   -   ON

CPB1110000NGSC

Ø16.00x1.00 SI (.630DIAx1.00 IS)
4.50 (.177)   11.70 (.460)
Ø18.00 (.708DIA)
27.00 (1.062)
0.22mm 2
Ø13.50 (.531DIA)
1.20 (.047)
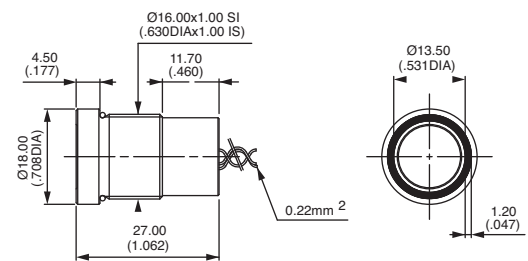
Bushing Ø 19 mm (.748) - standard ring

Momentary **CPB21**   OFF   -   MOM

Latching **CPB22**   OFF   -   ON

CPB2110000NGSC

Ø19.00x1.00 SI (.748 DIAx1.00 IS)
3.00 (.118)   6.70 (.263)
Ø22.00 (.866DIA)
27.00 (1.062)
0.22mm 2
Ø13.50 (.531DIA)
1.20 (.047)
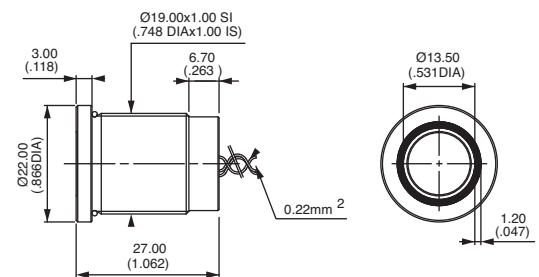
Bushing Ø 22 mm (.866) - large or thin ring

Momentary **CPB31**   OFF   -   MOM

Latching **CPB32**   OFF   -   ON

CPB3210000GGSC

Ø22.00x1.00 SI (.866DIAx1.00 IS)
4.50 (.177)   10.50 (.413)
30°
Ø28.00 (1.102DIA)
27.00 (1.062)
2.00 (.079)
0.22mm 2
Ø13.50 (.531DIA)   4.70 (.185)
Ø18.00 (.709DIA)   2.40 (.094)
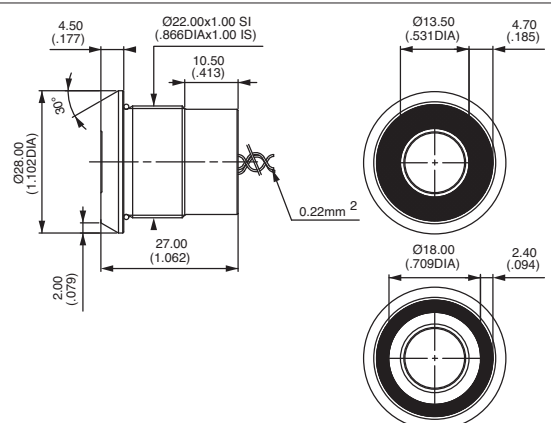
CP series

Capacitive switches

Options

TERMINALS
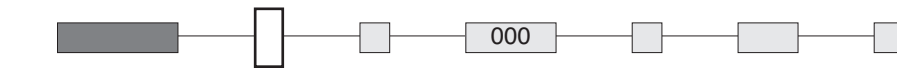
1	Flying leads
2	Cable
3	Connector HE14 6V (see opposite)
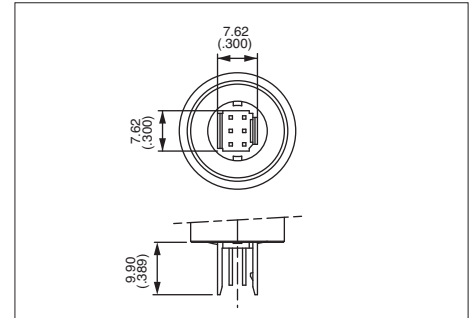
CASE COLOURS / MATERIALS
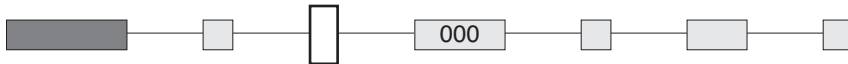
Code	Colour
0	**Natural anodized aluminium**
1	Blue anodized aluminium
2	**Black anodised aluminium**

Code	Colour
3	Green anodized aluminium
5	Gold anodized aluminium
6	Red anodised aluminium

TYPES OF ILLUMINATION
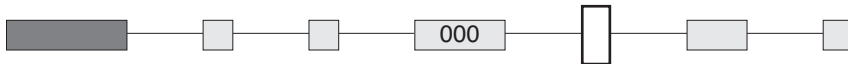
	5VDC	12VDC	24VDC
Non-illuminated	**0**	1	2
Standard ring (Ø 16 & 19 only)	A	N	K
Thin ring (Ø 22 only)	C	D	E
Large ring (Ø 22 only)	F	G	H

LED COLOURS
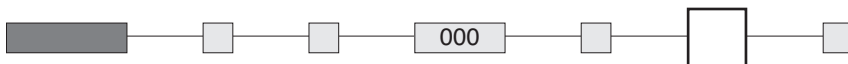
Blank   Non-illuminated

0B : blue - **0G** : green - **0S** : red - **0Y** : amber - **GS** : green/red

⚠ Blue, green and green/red LEDs available on 12VDC and 24VDC models only.

LED FUNCTIONS

S	Independent
C	Output indicator

Mouser Electronics

Authorized Distributor

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

[Apem](#):
  [CPB2110000N2AC](#) [CPB3210000G2AC](#) [CPB1110000K0BS](#)