

CAPTRON Capacitive Switches

Overview

SENSORswitches are capacitive pushbuttons that are activated without pressure, using a hand or other parts of the body. The buttons have a determinate sensing distance, which may be altered by varying the approach speed and/or damping factor. A quickly approaching finger will achieve a higher sensing distance than a slowly approaching finger. A hand, with its larger damping surface, will achieve a greater sensing distance than a finger at the same speed. The sensitivity of the buttons is specified by the electronic circuit and cannot be changed. All sensors are checked for consistent sensitivity values, which have been determined by long-standing experience.



Switch Type

Static

- The output signal is continuously on as long as the sensor area is activated.

Dynamic

- The output signal length is limited to x milliseconds when the sensor area is activated.

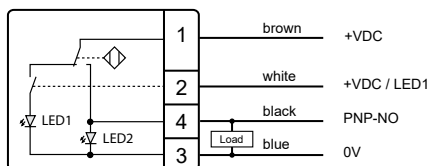
Toggle

- The output signal turns on when the sensor area is activated and stays on until the sensor area is activated again.

LED Control

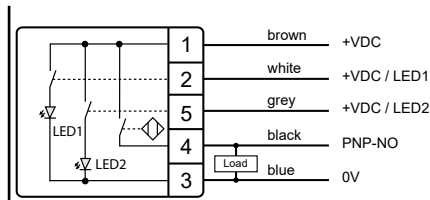
Semi-Automatic

Semi-Automatic (4-Pin) LED1 can be controlled separately. Ideal for when the system designer would like to display a flashing signal to prompt the user to activate and or touch the switch.



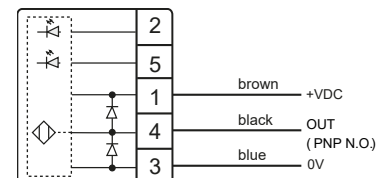
Manual

Manual (5-Pin) LED1 and LED2 can be controlled separately. Ideal for use when the user would like to show optical feedback acting like a signal indicator (e.g. CDL series or CML series indicator lights).



Automatic

Automatic (3-Pin) LED1 turns off and the LED2 lights up when the operating surface is touched. Ideal choice for all Human-Machine Interface (HMI) applications that require an intuitive and clearly visible status display.



CAPTRON

22mm IP69K Capacitive Switches

**CHT1-158X-XX**
(Hygienic)**CHT1-XXXX-XX-CPM20****CHT1-159X-XX****CHT3-456X-X-XXXXX****CHT3-456X-X-XXXX**

22mm IP69K Capacitive Switches, PNP, N.O.												
Part Number	Price	LED Color (Idle/Active)	Switch Type	Diameter mm	LED Control	Legend	Symbol Illuminated	Connection (M8)	Agency Approvals	Weight lbs	Drawing Link	
CHT1-158B-30		red/green	Static	40mm	Manual	-	No	5-pole	CE, CSA	0.09	PDF	
CHT1-158B-30-CPM20				28.5mm		-				0.07	PDF	
CHT1-158P-30				40mm	Semi-automatic	-		4-pole		0.08	PDF	
CHT1-158P-30-CPM20				-		0.06				PDF		
CHT1-159B-29				28.5mm	Manual	START		5-pole		0.07	PDF	
CHT1-159B-30						-				0.06	PDF	
CHT1-159P-29					Semi-automatic	START		4-pole		0.05	PDF	
CHT1-159P-30						-				0.05	PDF	
CHT12-159B-30					Toggle	Manual		-		5-pole	0.06	PDF
CHT12-159B-64								START/STOP			0.06	PDF
CHT12-159P-30				Semi-automatic		-		4-pole		0.05	PDF	
CHT12-159P-64						START/STOP				0.05	PDF	
CHT3-456B-29-TGSR			Dynamic	60mm	Manual	START		5-pole		0.22	PDF	
CHT3-456B-29-TGSRs			Static			START				0.22	PDF	
CHT3-456B-30-TGSR			Dynamic			-				0.22	PDF	
CHT3-456B-30-TGSRs			Static			-				0.22	PDF	
CHT3-456B-H-TGSR			Dynamic			Hand Symbol				0.22	PDF	
CHT3-456B-H-TGSRs			Static			Hand Symbol				0.22	PDF	
CHT3-456P-29-TGSR			Dynamic		Semi-automatic	START		4-pole		0.22	PDF	
CHT3-456P-29-TGSRs			Static			START				0.22	PDF	
CHT3-456P-30-TGSR			Dynamic			-				0.22	PDF	
CHT3-456P-30-TGSRs			Static			-				0.22	PDF	
CHT3-456P-H-TGSR			Dynamic			Hand Symbol				0.22	PDF	
CHT3-456P-H-TGSRs			Static			Hand Symbol				0.22	PDF	

Purchase cable separately.

CAPTRON

50 and 60mm IP69K Capacitive Switches



CHT3-15XX-XX-XXXX



CHT4-25XX-XX-XXXX



CHT4-25XX-X-XXXX

*50 and 60mm IP69K Capacitive Switches (Require AR3 or AR4 Cover Ring)													
Part Number	Price	LED Color (Idle/Active)	Switch Type	Barrel Size mm	Diameter (w/Cover ring) mm	LED Control	Legend	Symbol Illuminated	Connection (M8)	Agency Approvals	Weight lbs	Drawing Link	
CHT3-15XB-29-TGSR		red/green	Dynamic	50mm	88mm	Manual	START	No	5-pole	CE, CSA	0.18	PDF	
CHT3-15XB-29-TGSR S			Static				START					PDF	
CHT3-15XB-30-TGSR			Dynamic				-					PDF	
CHT3-15XB-30-TGSR S			Static				-					PDF	
CHT3-15XB-H-TGSR			Dynamic				Hand Symbol					PDF	
CHT3-15XB-H-TGSR S			Static				Hand Symbol					PDF	
CHT3-15XP-29-TGSR			Dynamic			Semi-automatic	START		4-pole			PDF	
CHT3-15XP-29-TGSR S			Static				START						PDF
CHT3-15XP-30-TGSR			Dynamic				-						PDF
CHT3-15XP-30-TGSR S			Static				-						PDF
CHT3-15XP-H-TGSR			Dynamic				Hand Symbol						PDF
CHT3-15XP-H-TGSR S			Static				Hand Symbol						PDF
CHT4-25XB-29-TGSR			Dynamic	60mm	100mm	Manual	START	5-pole	4-pole	0.21	PDF		
CHT4-25XB-30-TGSR							-				PDF		
CHT4-25XB-H-TGSR							Hand Symbol				PDF		
CHT4-25XP-29-TGSR		Semi-automatic				START	PDF						
CHT4-25XP-30-TGSR						-	PDF						
CHT4-25XP-H-TGSR						Hand Symbol	PDF						

*Purchase cable separately.

CAPTRON Cover Rings and Indicator Lights

AR3 Cover Ring (Fits All CHT3 Switches)			
Part Number	Price	Color	Image
<u>AR3-1X0</u>		Red	
<u>AR3-1X1</u>		Green	
<u>AR3-1X5</u>		Yellow	
<u>AR3-1X6</u>		Black	

AR4 Cover Ring (Fits All CHT4 Switches)			
Part Number	Price	Color	Image
<u>AR4-BX0</u>		Red	
<u>AR4-BX1</u>		Green	
<u>AR4-BX5</u>		Yellow	
<u>AR4-BX6</u>		Black	

*IP6K 22mm CDL and CML Series IP69K Indicator Lights											
Part Number	Price	Color	Material	Supply Voltage	Load Current	Current Consumption	Operating Temperature	Storage Temperature	Agency Approvals	Weight lbs	Drawing Links
<u>CDL1-158-30-GR</u>		Red/green	Plastic And Stainless Steel	24 VDC [21.6~26.4 V]	Max 400 mA	Max 20 mA @24V	-20 to 50°C [-4 to 122°F]	-25 to 55°C [-13 to 131°F]	CE, CSA	0.08	<u>PDF</u>
<u>CDL1-159-30-GR</u>			Plastic And Aluminum							0.05	<u>PDF</u>
<u>CML1-158-30</u>		Red/yellow/ green/blue/ white/orange/ violet	Plastic And Stainless Steel			Max 30 mA @24V				0.08	<u>PDF</u>
<u>CML1-159-30</u>			Plastic And Aluminum							0.05	<u>PDF</u>

*Purchase cable separately.



[CDL1-158-30-GR](#)
[CML1-158-30](#)
 (Hygienic)



[CDL1-159-30-GR](#)
[CML1-159-30](#)





Capacitive Switches Specifications

Specifications									
Part Number	Supply Voltage	Output	Output Pulse	Load Current	Current Consumption	Operating Temperature	Storage Temperature	IP Rating	Material
<u>CHT1</u>	10–30 VDC	PNP-N.O.	Continuous when actuated	Max 400 mA	Max 20 mA @24V	-30 to 70°C [-22 to 158°F]	-35 to 75°C [-31 to 167°F]	IP69K	CHT1-158 Plastic and Stainless Steel CHT1-159 and CHT12 Plastic and Aluminum
<u>CHT12</u>			Toggle						
<u>CHTX-XXXX-XX-TGSR</u>	24 VDC (21.6–26.4 V)		Approx. 300 ms		Max 30 mA @24V	-30 to 80°C [-22 to 176°F]	-35 to 85°C [-31 to 185°F]		CHT3-456X Plastic and Delrin CHT3-15XX and CHT4 Plastic and Polycarbonate
<u>CHTX-XXXX-XX-TGSRS</u>			Continuous when actuated			0 to 55°C [32 to 131°F]			