

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.

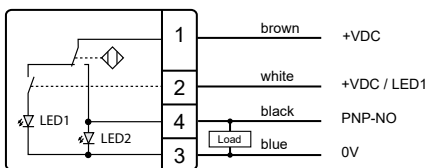
Toggle

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

LED Control

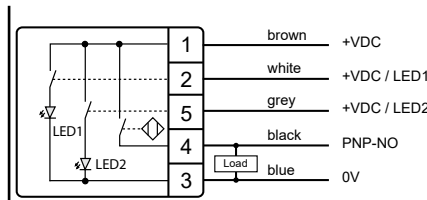
Semi-Automatic

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.



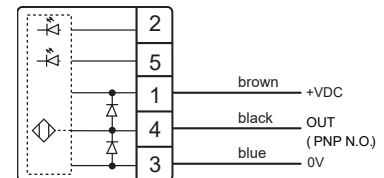
Manual

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.





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	\$104.00	red/green	Static	40.0 mm	Manual	-	No	5-pole	CE, CSA	0.09	PDF			
CHT1-158B-30-CPM20	\$104.00			28.5 mm		-				0.07	PDF			
CHT1-158P-30	\$85.00			40.0 mm	Semi-automatic	-		4-pole		0.08	PDF			
CHT1-158P-30-CPM20	\$85.00			-		0.06				PDF				
CHT1-159B-29	\$85.00			Manual	28.5 mm	START		5-pole		0.07	PDF			
CHT1-159B-30	\$85.00					-				0.06	PDF			
CHT1-159P-29	\$63.00			Semi-automatic	START	4-pole		0.05		PDF				
CHT1-159P-30	\$70.00				-			0.05		PDF				
CHT12-159B-30	\$93.00			Toggle	28.5 mm	Manual		-		5-pole	0.06	PDF		
CHT12-159B-64	\$93.00							START/STOP			0.06	PDF		
CHT12-159P-30	\$81.00		Semi-automatic			-		4-pole			0.05	PDF		
CHT12-159P-64	\$81.00					START/STOP					0.05	PDF		
CHT3-456B-29-TGSR	\$142.00		Dynamic	60.0 mm	Manual	START		5-pole		0.22	PDF			
CHT3-456B-29-TGSRs	\$142.00					Static				START	0.22	PDF		
CHT3-456B-30-TGSR	\$142.00					Dynamic				-	0.22	PDF		
CHT3-456B-30-TGSRs	\$142.00					Static				-	0.22	PDF		
CHT3-456B-H-TGSR	\$142.00					Dynamic				Hand Symbol	0.22	PDF		
CHT3-456B-H-TGSRs	\$142.00					Static				Hand Symbol	0.22	PDF		
CHT3-456P-29-TGSR	\$124.00					Dynamic				Semi-automatic	START	4-pole	0.22	PDF
CHT3-456P-29-TGSRs	\$124.00					Static					START		0.22	PDF
CHT3-456P-30-TGSR	\$124.00	Dynamic			-	0.22	PDF							
CHT3-456P-30-TGSRs	\$124.00	Static			-	0.22	PDF							
CHT3-456P-H-TGSR	\$124.00	Dynamic			Hand Symbol	0.22	PDF							
CHT3-456P-H-TGSRs	\$124.00	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	\$128.00	red/green	Dynamic	50.0 mm	88.0 mm	Manual	START	No	5-pole	CE, CSA	0.18	PDF									
CHT3-15XB-29-TGSR	\$128.00		Static				START					PDF									
CHT3-15XB-30-TGSR	\$128.00		Dynamic				-					PDF									
CHT3-15XB-30-TGSR	\$128.00		Static				-					PDF									
CHT3-15XB-H-TGSR	\$128.00		Dynamic				Hand Symbol					PDF									
CHT3-15XB-H-TGSR	\$128.00		Static				Hand Symbol					PDF									
CHT3-15XP-29-TGSR	\$118.00		Dynamic			START	Semi-automatic		4-pole			START	No	4-pole	CE, CSA	0.21	PDF				
CHT3-15XP-29-TGSR	\$118.00		Static			START						PDF									
CHT3-15XP-30-TGSR	\$118.00		Dynamic			-						PDF									
CHT3-15XP-30-TGSR	\$118.00		Static			-						PDF									
CHT3-15XP-H-TGSR	\$118.00		Dynamic			Hand Symbol						PDF									
CHT3-15XP-H-TGSR	\$118.00		Static			Hand Symbol						PDF									
CHT4-25XB-29-TGSR	\$163.00		Dynamic			Dynamic	60.0 mm		100.0 mm			Manual		START			No	5-pole	CE, CSA	0.21	PDF
CHT4-25XB-30-TGSR	\$163.00													-							PDF
CHT4-25XB-H-TGSR	\$163.00	Hand Symbol		PDF																	
CHT4-25XP-29-TGSR	\$128.00	START		4-pole	PDF																
CHT4-25XP-30-TGSR	\$128.00	-			PDF																
CHT4-25XP-H-TGSR	\$128.00	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>	\$23.00	Red	
<u>AR3-1X1</u>	\$23.00	Green	
<u>AR3-1X5</u>	\$23.00	Yellow	
<u>AR3-1X6</u>	\$23.00	Black	

AR4 Cover Ring (Fits All CHT4 Switches)			
Part Number	Price	Color	Image
<u>AR4-BX0</u>	\$23.00	Red	
<u>AR4-BX1</u>	\$23.00	Green	
<u>AR4-BX5</u>	\$23.00	Yellow	
<u>AR4-BX6</u>	\$23.00	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>	\$71.00	Red/green	Plastic And Stainless Steel	24VDC [21.6~26.4 V]	Max 400mA	Max 20mA @24V	-20 to 50°C [-4 to 122°F]	-25 to 55°C [-13 to 131°F]	CE, CSA	0.08	PDF
<u>CDL1-159-30-GR</u>	\$48.00		Plastic And Aluminum							0.05	PDF
<u>CML1-158-30</u>	\$74.00	Red/yellow/green/blue/white/orange/violet	Plastic And Stainless Steel			0.08				PDF	
<u>CML1-159-30</u>	\$49.00		Plastic And Aluminum			0.05				PDF	

*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 400mA	Max 20mA @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>	24VDC (21.6–26.4 V)		Approx. 300ms		Max 30mA @24V	-30 to 80°C [-22 to 176°F]	-35 to 85°C [-31 to 185°F]		
<u>CHTX-XXXX-XX-TGSRS</u>			Continuous when actuated			0 to 55°C [32 to 131°F]			