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.

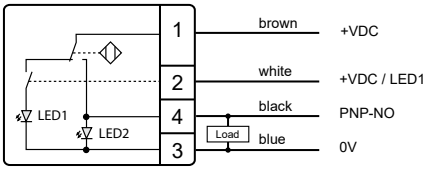
Toggle
- The output signal turns on when the sensor area is activated and stays on until the sensor area is activated again.

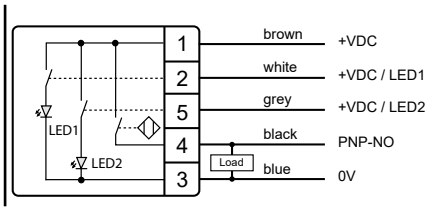
LED Control

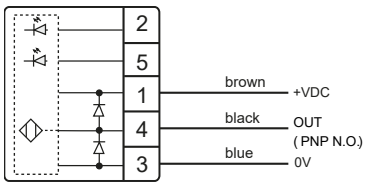
Semi-Automatic
Semi-Automatic (4-Pin) LED1 can be controlled separately. Ideal for when the system designer would like to display a flashing signal to prompt the user to activate and or touch the switch.

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	40.0 mm	Manual	-	No	5-pole	CE, CSA	0.09	PDF
CHT1-158B-30-CPM20				28.5 mm		-				0.07	PDF
CHT1-158P-30				40.0 mm	Semi-automatic	-		4-pole		0.08	PDF
CHT1-158P-30-CPM20				28.5 mm		-				0.06	PDF
CHT1-159B-29					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	60.0 mm	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	50.0 mm	88.0 mm	Manual	START	No	5-pole	CE, CSA	0.18	PDF
CHT3-15XB-29-TGSRS			Static				START					PDF
CHT3-15XB-30-TGSR			Dynamic				-					PDF
CHT3-15XB-30-TGSRS			Static				-					PDF
CHT3-15XB-H-TGSR			Dynamic				Hand Symbol					PDF
CHT3-15XB-H-TGSRS			Static				Hand Symbol					PDF
CHT3-15XP-29-TGSR			Dynamic			Semi-automatic	START		4-pole			PDF
CHT3-15XP-29-TGSRS			Static				START					PDF
CHT3-15XP-30-TGSR			Dynamic				-					PDF
CHT3-15XP-30-TGSRS			Static				-					PDF
CHT3-15XP-H-TGSR			Dynamic				Hand Symbol					PDF
CHT3-15XP-H-TGSRS			Static				Hand Symbol					PDF
CHT4-25XB-29-TGSR			Dynamic	60.0 mm	100.0 mm	Manual	START		5-pole		0.21	PDF
CHT4-25XB-30-TGSR							-					PDF
CHT4-25XB-H-TGSR							Hand Symbol					PDF
CHT4-25XP-29-TGSR						Semi-automatic	START		4-pole			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
AR3-1X0		Red	
AR3-1X1		Green	
AR3-1X5		Yellow	
AR3-1X6		Black	

AR4 Cover Ring (Fits All CHT4 Switches)

Part Number	Price	Color	Image
AR4-BX0		Red	
AR4-BX1		Green	
AR4-BX5		Yellow	
AR4-BX6		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
CDL1-158-30-GR		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
CDL1-159-30-GR			Plastic And Aluminum							0.05	PDF
CML1-158-30		Red/yellow/ green/blue/ white/orange/ violet	Plastic And Stainless Steel			Max 30mA @24V				0.08	PDF
CML1-159-30			Plastic And Aluminum							0.05	PDF

*Purchase cable separately.

CDL1-158-30-GR
CML1-158-30
(Hygienic)

CDL1-159-30-GR
CML1-159-30

CAPTRON

Capacitive Switches Specifications

Specifications									
Part Number	***Supply Voltage***	***Output***	***Output Pulse***	***Load Current***	***Current Consumption***	***Operating Temperature***	***Storage Temperature***	***IP Rating***	***Material***
CHT1	10–30 VDC	PNP-N.O.	Continuous when actuated	Max 400mA	Max 20mA @24V	-30 to70°C [-22 to158°F]	-35 to 75°C [-31 to 167°F]	IP69K	CHT1-158 Plastic and Stainless Steel CHT1-159 and CHT12 Plastic and Aluminum
CHT12			Toggle						
CHTX-XXXX-XX-TGSR	24VDC (21.6–26.4 V)		Approx. 300ms		Max 30mA @24V	-30 to 80°C [-22 to176°F]	-35 to 85°C [-31 to 185°F]		CHT3-456X Plastic and Delrin CHT3-15XX and CHT4 Plastic and Polycarbonate
CHTX-XXXX-XX-TGSRS			Continuous when actuated			0 to 55°C [32 to131°F]			