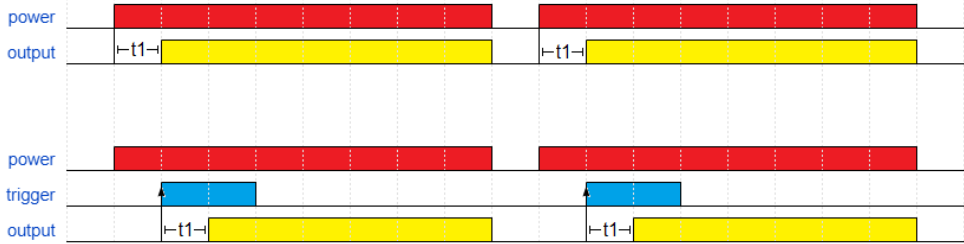
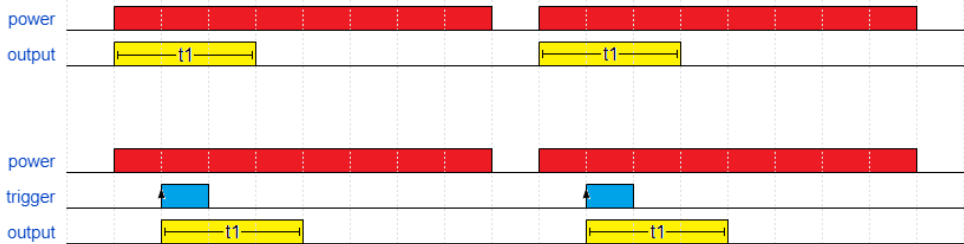
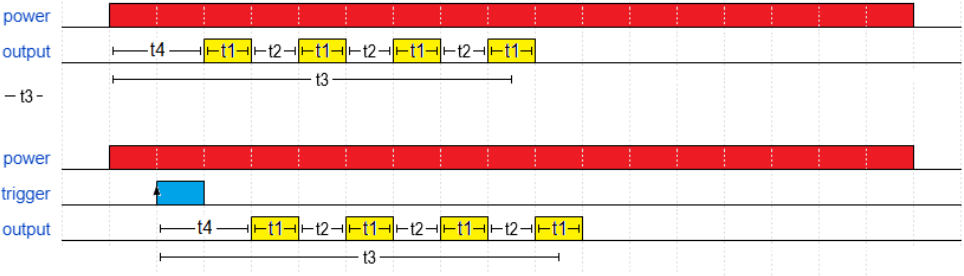
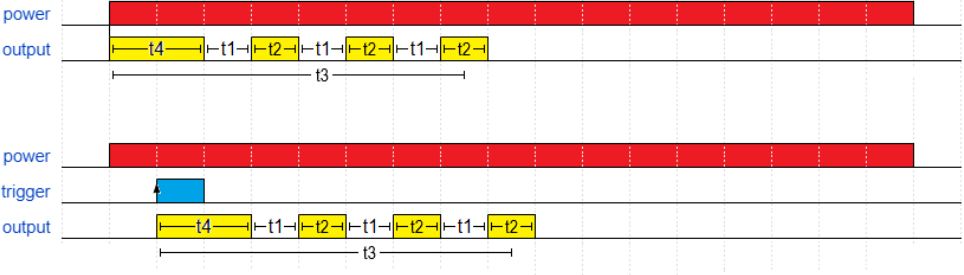
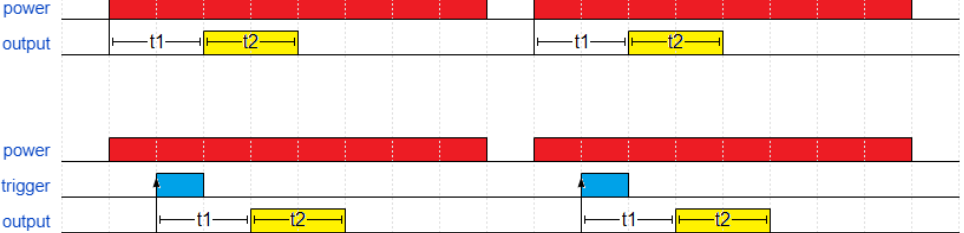
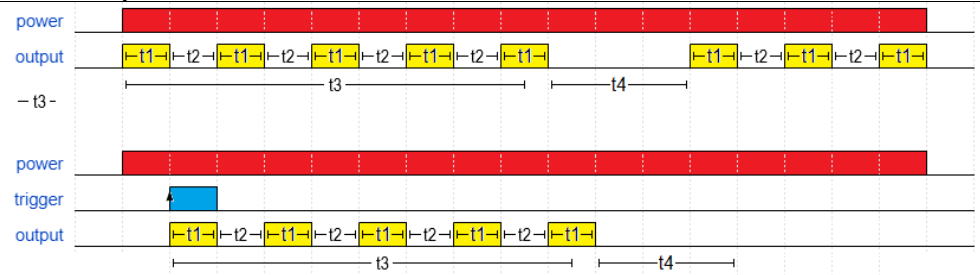
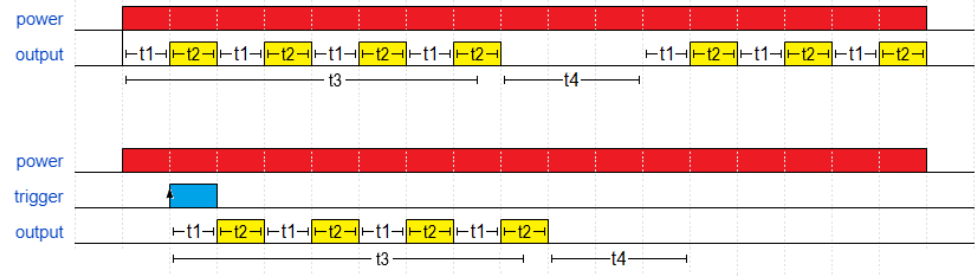
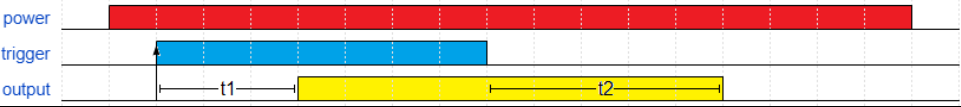
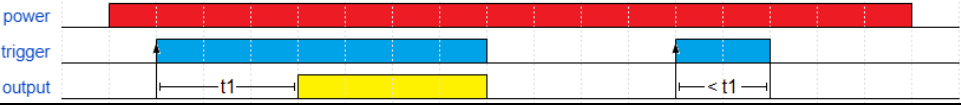
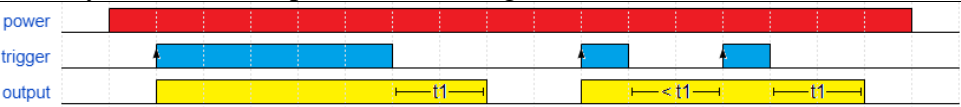




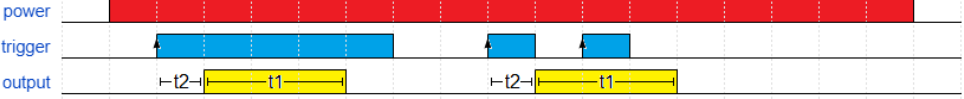
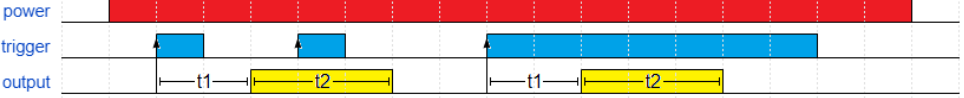
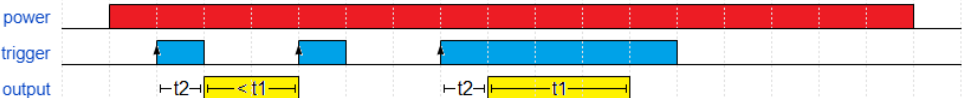
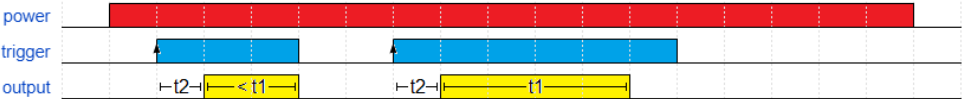
List of Available Functions

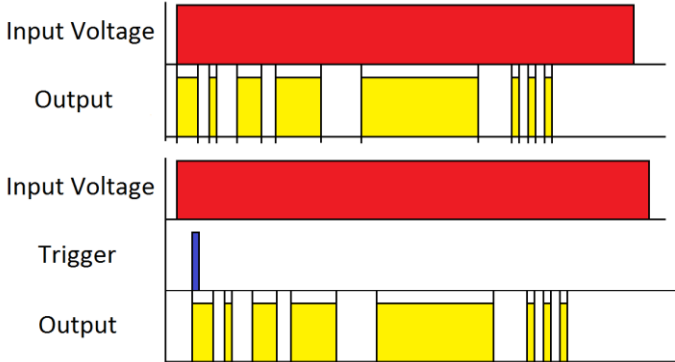
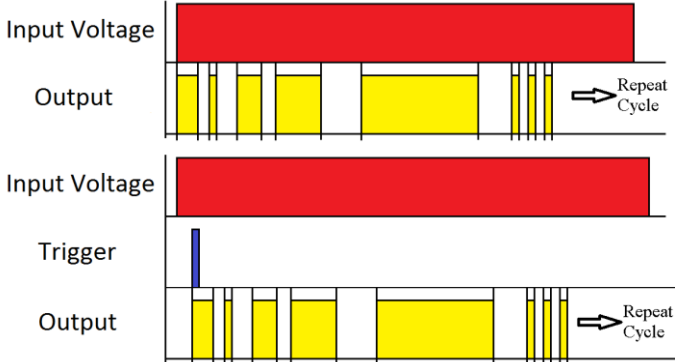
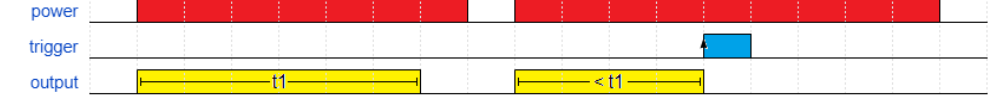
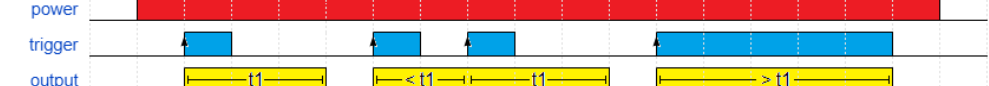
#	Function	Operation
1	ON DELAY	<p data-bbox="462 804 1450 909">When input voltage is applied, the time delay (t_1) starts. After the time delay (t_1) completes, the output becomes energized. To reset the time delay relay and de-energize the output, the input voltage must be removed.</p>  <p>The first diagram shows two cycles of power (red) being applied. In each cycle, the output (yellow) remains off for a time delay t_1 before becoming energized. The second diagram shows two cycles of power (red) being applied. In each cycle, a trigger pulse (blue) is applied, and after a time delay t_1, the output (yellow) becomes energized.</p>
2	INTERVAL ON	<p data-bbox="462 1388 1471 1524">Upon the application of input voltage, the output becomes energized, initiating the time delay period (t_1). Once the time delay (t_1) concludes, the output is then de-energized. To reset the time delay relay, the input voltage must be disconnected.</p>  <p>The first diagram shows two cycles of power (red) being applied. In each cycle, the output (yellow) is energized for a time interval t_1 after power is applied. The second diagram shows two cycles of power (red) being applied. In each cycle, a trigger pulse (blue) is applied, and the output (yellow) is energized for a time interval t_1.</p>


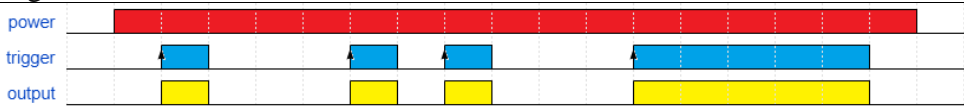
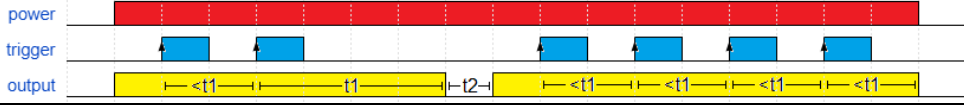
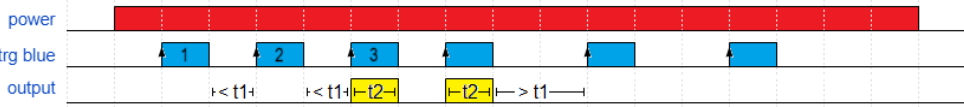
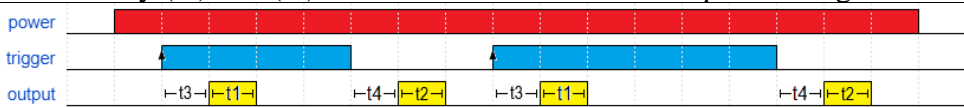
#	Function	Operation
3	REPEAT CYCLE WITH INITIAL DELAY	<p>Upon application of voltage, time delay (t_3) begins, and the output is delayed for (t_4), then energized for the time delay (t_1) and de-energized for (t_2) until (t_3) timeout is reached. (t_3) set to 0 will repeat the cycle indefinitely.</p> 
4	REPEAT CYCLE WITH INITIAL DELAY (On first)	<p>Upon application of voltage, time delay (t_3) begins, and the output is energized for (t_4), then de-energized for the time delay (t_1) and energized for (t_2) until (t_3) timeout is reached. (t_3) set to 0 will repeat the cycle indefinitely.</p> 
7	DELAYED INTERVAL Single Cycle	<p>Upon the application of input voltage, the initial time delay (t_1) starts. After the completion of this initial time delay (t_1), the output becomes energized and stays energized for the duration of the second time delay (t_2). Following the conclusion of this second time delay (t_2), the output is de-energized. To reset the time delay relay, the input voltage must be removed.</p> 


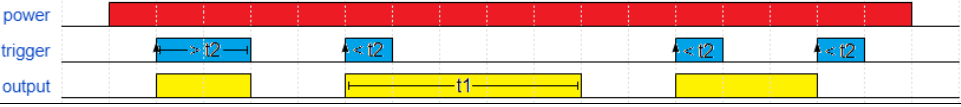
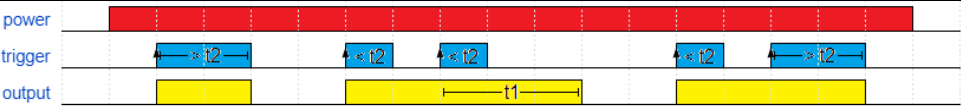

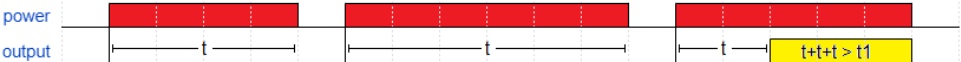
#	Function	Operation
		<hr style="width: 20%; margin: auto;"/>
8	REPEAT CYCLE (On First)	<p>Upon application of voltage, time delay (t_3) begins, and the output is energized for the time delay (t_1). At the end of the time delay (t_1), the output is de-energized for the time delay (t_2) and continues to cycle until (t_3) is reached. t_3 set to 0 will repeat the cycle indefinitely. t_4 is used to insert an inactive phase. t_4 set to 0 will force the cycle to end when t_3 expires.</p> 
9	REPEAT CYCLE (Off First)	<p>Upon application of voltage, time delay (t_3) begins, and the output is de-energized for the time delay (t_1). At the end of the time delay (t_1), the output is energized for the time delay (t_2) and continues to cycle until (t_3) is reached. t_3 set to 0 will repeat the cycle indefinitely. t_4 is used to insert an inactive phase. t_4 set to 0 will force the cycle to end when t_3 expires.</p> 


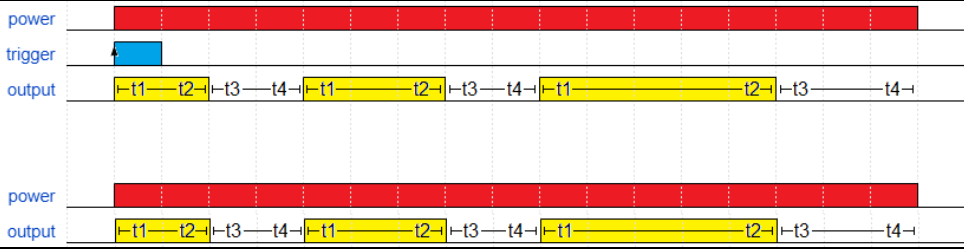
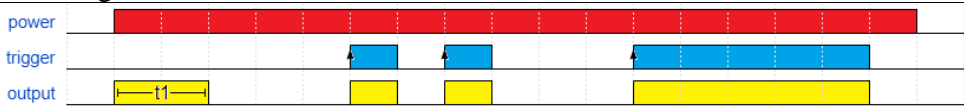
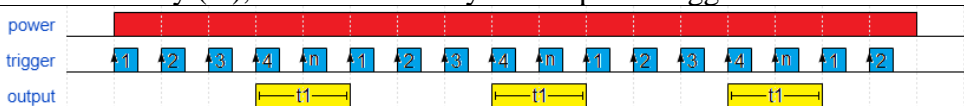
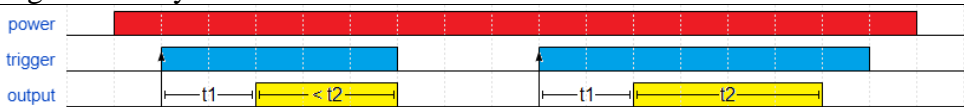
#	Function	Operation
10	ON/OFF DELAY	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the time delay (t_1) begins. At the end of the time delay (t_1), the output is energized. When the trigger is removed, the output remains energized for the time delay (t_2). At the end of the time delay (t_2), the output is de-energized, and the time delay relay is ready to accept another trigger. If the trigger is removed during the time delay period (t_1), the output will remain de-energized, and the time delay (t_1) will reset. If the trigger is re-applied during the time delay period (t_2), the output will remain energized, and the time delay (t_2) will reset.</p> 
11	TRIGGERED ON DELAY	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the time delay (t) begins. At the end of the time delay (t), the output is energized and remains in that condition as long as either the trigger is applied, or the input voltage remains. If the trigger is removed during the time delay (t), the output remains de-energized, and the time delay (t) is reset.</p> 
12	OFF DELAY	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized. Upon removal of the trigger, the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized.</p> 
13	SINGLE-SHOT WITH TIME RESET	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and timer delay (t) begins. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized.</p> 


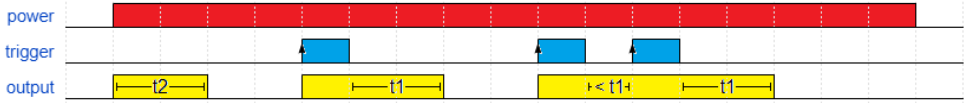
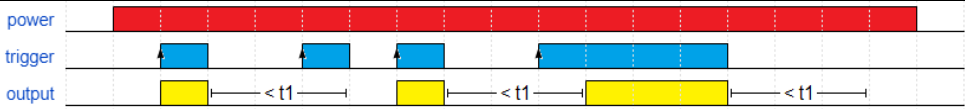
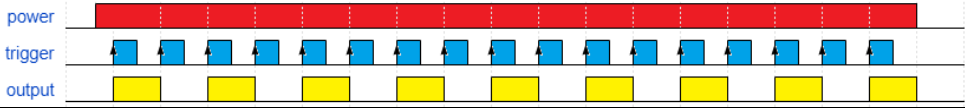
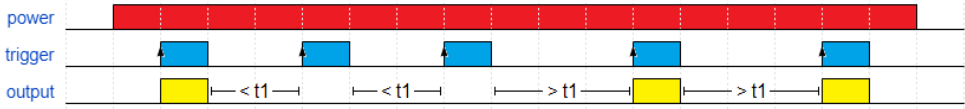
#	Function	Operation
		
14	SINGLE-SHOT	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and the time delay (t) begins. During the time delay (t), the trigger is ignored. At the end of the time delay (t), the output is de-energized, and the time delay is ready to accept another trigger.</p> 
15	TRIGGERED DELAY INTERVAL Single Cycle	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied, the time delay (t1) begins. At the end of the time delay (t1), the output is energized and remains in that condition for the time delay (t2). At the end of the time delay (t2), the output is de-energized, and the relay is ready to accept another trigger. During both time delay (t1) and time delay (t2), the trigger is ignored.</p> 
16	INTERVAL ON WITH OFF TRIGGER	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied, the output is energized, and the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Application of trigger during time delay (t) will cause time delay (t) to expire and output is de-energized.</p> 
17	INTERVAL ON TRIGGER CONTROLLED	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied, the output is energized, and the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Removal of the trigger during time delay (t) will cause time delay (t) to expire and output is de-energized.</p> 

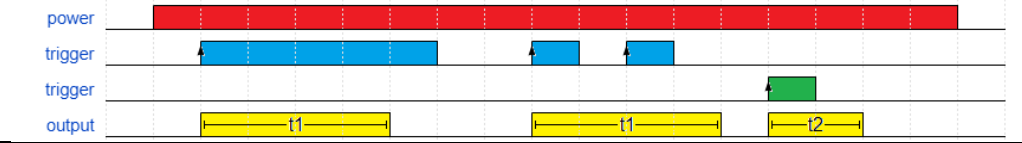
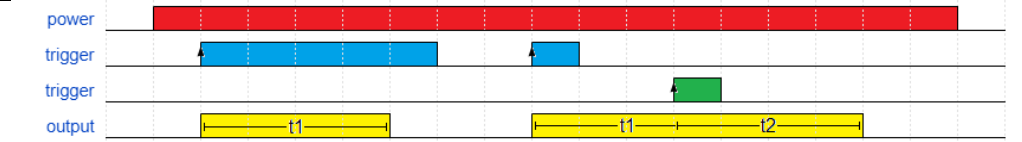
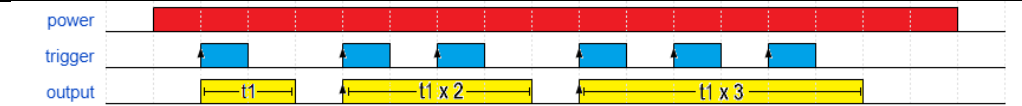
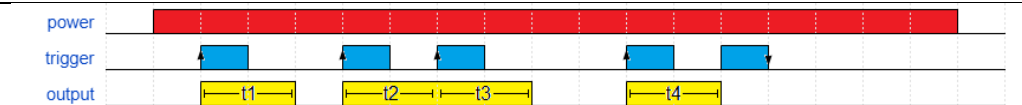
#	Function	Operation
18	FREE FORM ONE TIME (Up to 48 configuration points)	<p data-bbox="464 268 1451 373">Upon application of voltage, time delay begins, and free-form pattern programmed by the user is executed. When the pattern is completed it can be retriggered again.</p> 
19	FREE FORM REPEATED (Up to 48 configuration points)	<p data-bbox="464 762 1438 867">Upon application of voltage, time delay begins, and free pattern cycle programmed by the user is executed. Once started the cycle will be repeated over and over.</p> 
20	CANCELED INTERVAL	<p data-bbox="464 1255 1455 1392">Upon application of input voltage, the output is energized, and the time delay (t) begins. At the end of the time delay (t), the output is de-energized. If the trigger is applied during the time delay (t) the output is de-energized and the delay canceled. Input voltage must be removed to reset the time delay relay.</p> 
21	SINGLE SHOT TIME RESET HOLD ON TRIGGER	<p data-bbox="464 1654 1471 1833">Upon application of input voltage, the timer is ready to accept a trigger. When the trigger is applied, the output is energized, and timer delay (t) begins. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized. If the trigger still applied after the delay (t) the output remains energized until the trigger is removed.</p> 

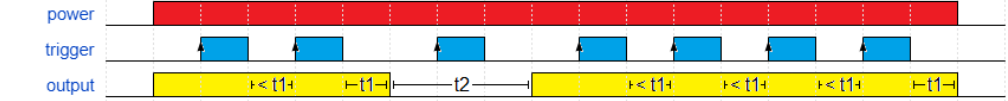
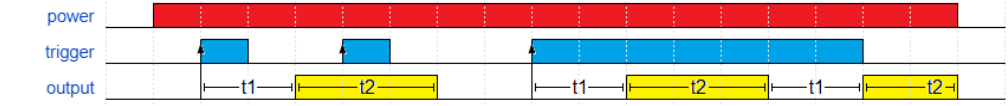
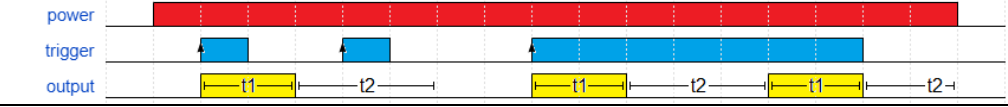
#	Function	Operation
		
22	FOLLOW	<p>Upon application of input voltage, a standard relay is ready to accept a trigger. When the trigger is applied, the output is energized. The output continues to be energized until the trigger is removed, at which point the output is de-energized.</p> 
23	WATCHDOG 1	<p>When an input voltage is applied, the timer relay's output becomes energized, and the relay is primed to receive a trigger signal. If the trigger is activated at any point during the first-time delay period (t_1), this action will reset the timer for t_1, and the output continues to remain energized. Once the time delay period t_1 concludes without further triggers, the output is then de-energized for a second time delay period (t_2) and then the cycle repeats.</p>  <p>Display diagram online: https://wavedrom.com/editor.html</p> <pre data-bbox="462 1018 885 1134"> { signal: [{ name: "power", wave: 'lh.....l' }, { name: "trigger", wave: 'l.HIHL...HIHIHIHL.' }, { name: "output", wave: 'lh.....lh.....l' }]} </pre>
24	FUNCTION 24	<p>When an input voltage is applied, the timer is ready to accept trigger input. If the duration between triggers is less than t_1 and timer counts n consecutive triggers then output follows the trigger until the duration between triggers exceeds t_1.</p>  <p>Practical use. This function can be used as a turn signal alarm configured to be activated after set number of cycles. The timer output will be activated for t_2 or the duration of the trigger. The blue and green triggers are connected to turn signal bulbs on each side. The trigger is configured to mode 2 and the trigger function set to XOR. Function XOR will allow either blue or green trigger to activate the alarm, but the simultaneous execution during hazard activation would cancel the trigger.</p>
25	OUTPUT ON TRIGGER CHANGE	<p>Upon application of input voltage, the timer relay is ready to accept trigger input. When the trigger is applied the output is energized for the time delay (t_1). The release of the trigger also energizes the output for time (t_2). The optional delay (t_3) and (t_4) can be inserted before the output is energized.</p> 

#	Function	Operation
		
26	BUTTON INTERFACE WITH TIMEOUT	<p>Upon application of input voltage, the timer relay is ready to accept trigger input. With short ($< t_2$) application of trigger the output is energized for the time delay (t_1). The second application of the trigger will de-energize the output. With long ($> t_2$) application of trigger, the output is energized and held energized until the trigger is removed.</p> 
28	FUNCTION 28	<p>Upon application of input voltage, the timer relay is ready to accept trigger input. With short ($< t_2$) application of trigger the output is energized for the time delay (t_1). The second application of the trigger will reset delay (t_1). With long ($> t_2$) application of trigger, the output is energized and held energized until the trigger is removed. With long ($> t_2$) application of trigger during the active output, the timeout is canceled and output stays energized until the trigger is removed.</p> 
29	INTERVAL WITH LOCKOUT Single Cycle	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied the output is energized and the time delay (t_1) begins. At the end of the time delay (t_1), the output is de-energized and remains in that condition for the time delay (t_2). During both time delay (t_1) and time delay (t_2), the trigger is ignored.</p> 
30	POWER INDEPENDENT TIMER	<p>Timer operation is intended as a countdown timer. The countdown stops when power is removed but continues when power is reapplied. To run the timer in this mode first configure timer time, function and trigger. Activating trigger for > 5 secs resets the timer and countdown starts. When the sum of the time is greater than the preset time the output becomes active. Activating trigger for > 5 secs resets the countdown.</p> 

#	Function	Operation
		
31	REPEAT RANDOM CYCLE	<p>The function is similar to Function #5 (Repeat cycle). The duration of the first active phase of the cycle is randomly calculated with the range set between t1 and t2. The passive phase is between t3 and t4.</p> 
32	FOLLOW WITH INITIAL ON	<p>Upon application of input voltage, the output is energized, and the time delay (t) begins. At the end of the time delay (t), the output follows the trigger level. When the trigger is applied, the output is energized and continues to be energized until the trigger is removed. When the trigger is removed the output is de-energized.</p> 
33	COUNTER	<p>Upon application of input voltage, the timer is ready to accept the trigger. Once the trigger is detected preset number of cycles (n) the output is activated for the duration (t1). The trigger is ignored during the active output. At the end of the time delay (t1), the timer is ready to accept the trigger.</p> 
34	DELAY ON WITH TIMEOUT	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the time delay (t1) begins. At the end of the time delay (t1), the output is energized. The output remains energized for a period of t2 unless the trigger is removed. If trigger is removed the output de-energized and cycle ends.</p> 

#	Function	Operation
		
35	OFF DELAY WITH INITIALIZATION	<p data-bbox="464 268 1474 485">Upon application of input voltage, the output is energized for t_2. The timer relay is ready to accept a trigger. When the trigger is applied, the output is energized. Upon removal of the trigger, the time delay (t) begins. At the end of the time delay (t), the output is de-energized. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized.</p> 
36	FOLLOW WITH LOCKOUT	<p data-bbox="464 743 1474 919">Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized and continues to be energized until the trigger is removed. When the trigger is removed the output is de-energized and period t_1 starts. During the t_1 period the timer will not respond to the trigger.</p> 
37	FLIP FLOP WITH COUNTER	<p data-bbox="464 1184 1474 1255">Upon application of input voltage, the timer relay is ready to accept a trigger. Once the trigger is detected preset number of cycles (n) the output is flipped.</p> 
38	FOLLOW WITH LOCKOUT 2	<p data-bbox="464 1520 1474 1696">Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized and continues to be energized until the trigger is removed. When the trigger is removed the output is de-energized and period t_1 starts. During the t_1 period the timer will not respond to the trigger and the lockout time t_1 will reset.</p> 

#	Function	Operation
39	SINGLE-SHOT WITH TWO TRIGGERS	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and the time delay (t_1) begins. During the time delay (t_1), the trigger is ignored. At the end of the time delay (t_1), the output is de-energized, and the time delay is ready to accept another trigger. The same applies to trigger 2 (Green)</p> 
40	SINGLE-SHOT WITH TWO TRIGGERS 2	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and the time delay (t_1) begins. During the time delay (t_1), the trigger is ignored. At the end of the time delay (t_1), the output is de-energized, and the time delay is ready to accept another trigger. Application of the trigger 2 would reset the time delay to t_2.</p> 
41	ACCUMULAT OR	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and timer delay (t) begins. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized. Each consecutive trigger application increases the timer delay (t_1).</p> 
42	SINGLE SHOT WITH CANCEL	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the output is energized, and timer delay (t) begins. Any application of the trigger during the time delay will reset the time delay (t) and the output remains energized. Each consecutive trigger application sets the next time delay until reached the timer delay (t_4). The next application of trigger will cancel the output. The output is also cancelled if time delay is set to 0.</p> 

#	Function	Operation
43	WATCHDOG 2	<p>When an input voltage is applied, the timer relay's output becomes energized, and the relay is primed to receive a trigger signal. If the trigger is activated at any point during the first-time delay period (t_1) the time delay period (t_1) is reset, and stays reset while trigger is active. The output stays energized. When trigger goes inactive the time delay (t_1) starts. Once the time delay period t_1 concludes without further triggers, the output is then de-energized for a second time delay period (t_2). Trigger application is ignored during delay period (t_2). Upon completion of delay period (t_2) the output is energized, and delay period (t_1) is reset.</p> 
44	TRIGGERED DELAY INTERVAL Multiple Cycles	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied, the time delay (t_1) begins. At the end of the time delay (t_1), the output is energized and remains in that condition for the time delay (t_2). At the end of the time delay (t_2), the output is de-energized, and the relay is ready to accept another trigger. During both time delay (t_1) and time delay (t_2), the trigger is ignored.</p> 
45	INTERVAL WITH LOCKOUT Multiple Cycles	<p>Upon application of input voltage, the timer relay is ready to accept the trigger. When the trigger is applied the output is energized and the time delay (t_1) begins. At the end of the time delay (t_1), the output is de-energized and remains in that condition for the time delay (t_2). During both time delay (t_1) and time delay (t_2), the trigger is ignored.</p> 

#	Function	Operation
46	ON/OFF DELAY WITH CANCEL	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied, the time delay (t1) begins. At the end of the time delay (t1), the output is energized. The output remains energized for the time delay (t3). If trigger is applied while output is active the time delay (t2) begins. At the end of the time delay (t2), the output is de-energized. After output is de-energized the time delay (t4) begins during which the trigger application is ignored.</p>
47	ON/OFF DELAY WITH CANCEL AND FOLLOW	<p>Upon application of input voltage, the timer relay is ready to accept a trigger. When the trigger is applied the output is activated and the time delay (t1) begins. At the end of the time delay (t1), the output continues to be energized even if trigger is removed. The output remains energized for the time delay (t3). If trigger is applied while output is active the time delay (t2) begins. At the end of the time delay (t2), the output is de-energized. After output is de-energized the time delay (t4) begins during which the trigger application is ignored.</p>
48	COUNTER WITH TIME RESTRICTION	<p>Upon application of input voltage, the timer is ready to accept the trigger. Once the trigger is detected preset number of cycles (n) applied during period shorter than t1 the output is activated for the duration (t2). The trigger is ignored during the active output. At the end of the time delay (2t1), the timer is ready to accept the trigger.</p>