
TACHOMETER MODE

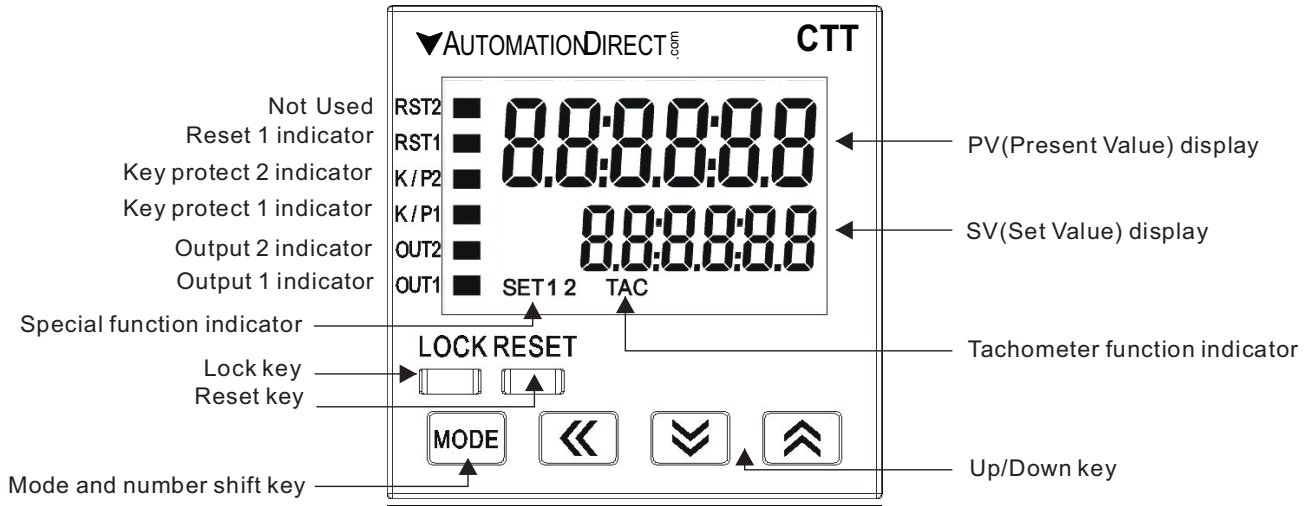


CHAPTER 5

In This Chapter...

Display, Indicators and Keys	5-2
Functions	5-2
Tachometer Output Modes	5-3
2Lo1Lo	5-3
2Lo1Hi	5-3
2Hi1Lo	5-3
2Hi1Hi	5-4
Tachometer Wiring Examples	5-4
Dip Switch Settings	5-4
Setting Parameters	5-5

Display, Indicators and Keys



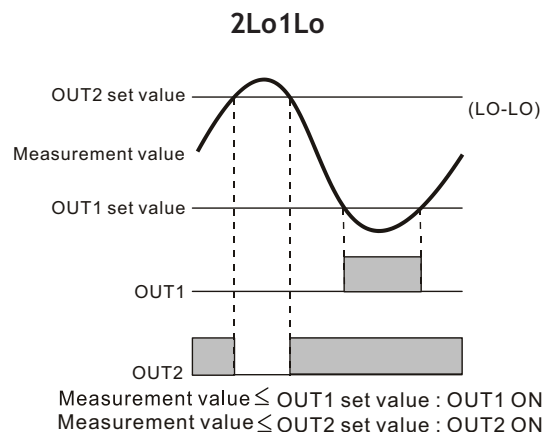
LCD Display and Indicators			
RST 1/2	Light on when reset signal is detected	SET 1 2	SV1, SV2 display
K/P 1/2	Light on when key-protected mode is enabled	TAC	Light on in Tachometer function
OUT 1/2	Light on when output is executing		
Key Operation			
	Increase and decrease SV or change parameter settings		
	Left move 1 digit of the selected digit. The indicator of the selected digit will flash.		
MODE	Save the set parameters or switch among functions.		
LOCK	Prevent settings from being changed. Key-protected mode still works after the power is switched off. Press LOCK to enter key-protected mode. In non-key-protected status, press LOCK to enter Lock 1, press LOCK again to enter Lock 2. Press MODE and at the same time to disable key-protected mode. LOCK 1 (Lock 1) disables the functions of all keys. LOCK 2 (Lock 2) allows users to change SV and functions of RESET remain. LOCK only functions in non-key-protected status.		
RESET	Clear and reset PV.		
Modes: Operation Mode and Configuration Mode			
Operation	When the power is on, the timer/counter/tachometer is in the operation mode. Press to change SV, or to make change on a desired digit. The indicator of the selected digit will flash. After the change is made, press MODE to save the setting. If SV or parameters are not changed, press MODE once to switch between SET1 and SET2.		
Configuration	Press MODE in operation mode for more than 3 seconds to enter configuration mode. Press MODE once to switch among parameters. To return to operation mode, press MODE for more than 3 seconds.		

Tachometer Output Modes

2Lo1Lo

When the measured present value PV is less than or equal to the set value SV1 Output 1 will turn ON. When the measured PV is greater than SV1 Output 1 will turn OFF.

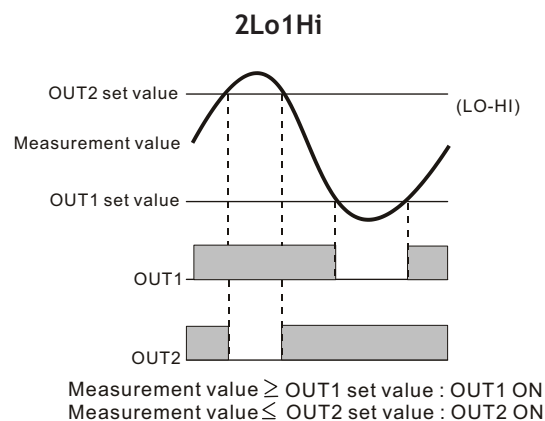
When the measured present value PV is less than or equal to the set value SV2 Output 2 will turn ON. When the measured PV is greater than SV2 Output 2 will turn OFF.



2Lo1Hi

When the measured present value PV is greater than or equal to the set value SV1 Output 1 will turn ON. When the measured PV is less than SV1 Output 1 will turn OFF.

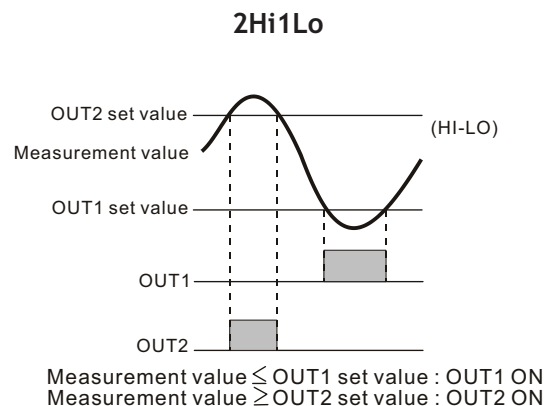
When the measured present value PV is less than or equal to the set value SV2 Output 2 will turn ON. When the measured PV is greater than SV2 Output 2 will turn OFF.



2Hi1Lo

When the measured present value PV is less than or equal to the set value SV1 Output 1 will turn ON. When the measured PV is greater than SV1 Output 1 will turn OFF.

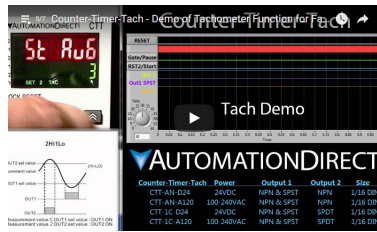
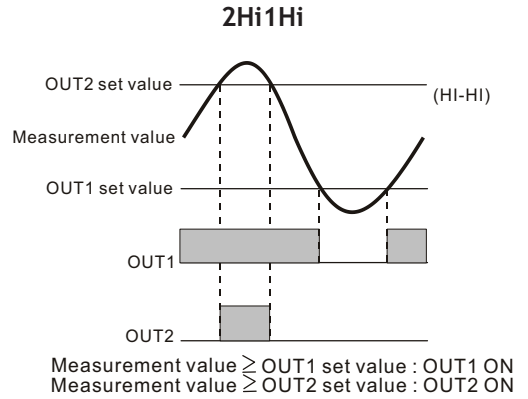
When the measured present value PV is greater than or equal to the set value SV2 Output 2 will turn ON. When the measured PV is less than SV2 Output 2 will turn OFF.



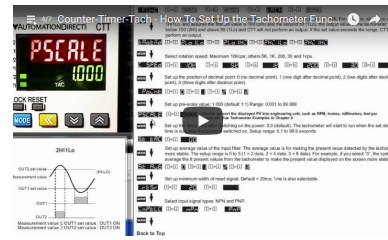
2Hi1Hi

When the measured present value PV is greater than or equal to the set value SV1 Output 1 will turn ON. When the measured PV is less than SV1 Output 1 will turn OFF.

When the measured present value PV is greater than or equal to the set value SV2 Output 2 will turn ON. When the measured PV is less than SV2 Output 2 will turn OFF.

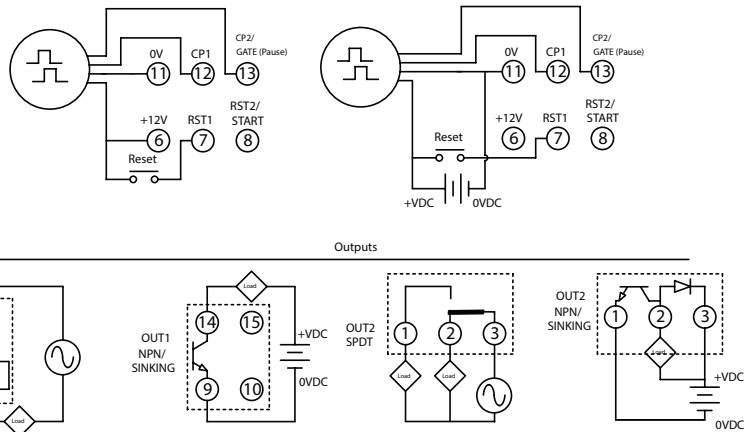


Click on the above thumbnail or go to <https://www.automationdirect.com/VID-RL-0006> for a short Tachometer demo video.



Click on the above thumbnail or go to <https://www.automationdirect.com/VID-RL-0005> for a Tachometer Set-up video.

Tachometer Wiring Examples



DIP Switch Set Up of the CTT Parameters:

Dip Switch Settings - Table 1			
Switch	Function	Off	On
1	Dip switch	Disabled	Enabled
2	N/A	N/A	N/A
3	Output mode	See Output Mode Table - Table 2	
4			
5	Counting Speed	30Hz	10KHz
6	N/A	N/A	N/A
7	Input type	NPN	PNP
8	Reset signal pulse width	20 ms	1 ms

Output Mode - Table 2		
Switch 3	Switch 4	Output Mode
OFF	OFF	Lo-Lo
ON	OFF	Lo-Hi
OFF	ON	Hi-Lo
ON	ON	Hi-Hi

Keypad set up of the parameters in the Tachometer:

To enter the page for parameter setting of the counter, press **MODE** for the main menu for more than 3 seconds. After the setup is completed, press **MODE** for more than 3 seconds under any of the parameter page you are in and return to the main menu.

Select functions: There are 4 modes in CTT, (left to right) timer, counter, tachometer and timer + counter.

FUNC [▼/or/▲] **CTMR** [▼/or/▲] **CNT** [▼/or/▲] **TACH** [▼/or/▲] **TCY**

MODE ↓
 Select output modes: There are 4 output modes, 2Lo1Lo, 2Lo1Hi, 2Hi1Lo, and 2Hi1Hi, For example, when you select 1Hi1Lo, and assume the first set value is 100 (2Hi) and the second 50 (1Lo), the output value of the tachometer will be below 100 (2Hi) and above 50 (1Lo) and CTT will not perform an output. If the set value exceeds the range, CTT will perform an output.

Output [▼/or/▲] **2Lo1Lo** [▼/or/▲] **2Lo1Hi** [▼/or/▲] **2Hi1Lo** [▼/or/▲] **2Hi1Hi**

MODE ↓
 Select rotation speed: Maximum 10Kcps; others 5K, 1K, 200, 30 and 1cps.

SPEED [▼/or/▲] **10K** [▼/or/▲] **5K** [▼/or/▲] **1K** [▼/or/▲] **200** [▼/or/▲] **30** [▼/or/▲] **1**

MODE ↓
 Set up the position of decimal point: 0 (no decimal point), 1 (one digit after decimal point), 2 (two digits after decimal point), 3 (three digits after decimal point).

Point [▼/or/▲] **0** [▼/or/▲] **1** [▼/or/▲] **2** [▼/or/▲] **3**

MODE ↓
 Set up pre-scale value: 1.000 (default 1:1) Range: 0.001 to 99.999

PSCALE [▼/or/▲] **1000** Used to convert the displayed PV into engineering unit, such as RPM, inches, millimeters, feet per minute etc. See Tachometer Examples in Chapter 6

MODE ↓
 Set up the delay time after switching on the power: 0.0 (default). The tachometer will start to run when the set delay time is due after the power is switched on. Setup range: 0.1 to 99.9 seconds

St TAC [▼/or/▲] **00**

MODE ↓
 Set up average value of the input filter: The average value is for making the present value detected by the tachometer more stable. The setup range is 0 to 3 (1 = 2 data, 2 = 4 data, 3 = 8 data). For example, if you select "3", the system will average the 8 present values from the tachometer to make the present value displayed on the screen more stable.

St Avg [▼/or/▲] **0** [▼/or/▲] **1** [▼/or/▲] **2** [▼/or/▲] **3**

MODE ↓
 Set up minimum width of reset signal: Default = 20ms; 1ms is also selectable.

rtSr [▼/or/▲] **20** [▼/or/▲] **1**

MODE ↓
 Select input signal types: NPN and PNP.

INP/LL [▼/or/▲] **NPN** [▼/or/▲] **PNP**

MODE ↓

Back to Top