PROGRAMMABLE BACK-UP TIMER
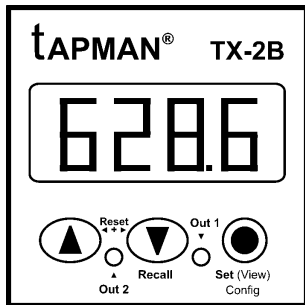


Specifications

Display:	4 digit LED display.
Time ranges:	99.99 / 999.9 / 9999 sec, 99:59 Min:sec, 999.9 / 9999 min, 99:59 Hr:Min 999.9 / 9999 Hrs.
Counting Direction:	Up / Down.
Modes:	a) ON delay b) Interval c) Cyclic On first d) Cyclic OFF first.
Time setting:	By front keypad.
Outputs:	2 C/O.
Relay rating:	7A @ 240VAC.
Inputs:	a) *START* b) *RESET*
Reset:	a) Front panel. b) Rear terminal. c) On power interruption.
Reset Time:	Less than 100ms.
Accuracy:	±0.05% or 50msec which ever is greater.
Supply:	220VAC ±10% @ 50 / 60 Hz.
Mounting:	Panel mounting.
Housing:	ABS.
Operating Temperature:	0˚C to 50˚C.
Humidity:	95% R.H. Non condensing.

OPERATING MODES

Precautions during use

High voltage spikes (noise) present in the industrial environment can cause malfunctioning of the instrument like erratic display, latch up, data loss or permanent damage to the instrument.
To reduce the chances of malfunction
a) Use of MOV across supply of timers and snubber circuits across loads are recommended.
b) Use separate shielded wires for inputs.
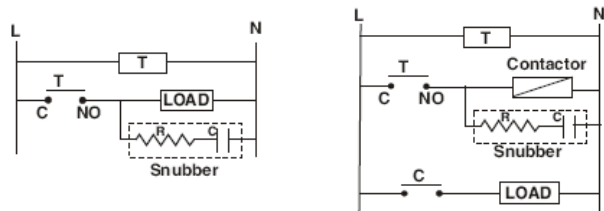
SET VALUE PROGRAMMING

1. **On-delay / Interval mode**
   a. Keep the ◎ button pressed for 3 seconds.
   b. The display shows the Set value and starts to flash (on and off).
   c. Using △ and ▽ buttons change to desired value.
   d. While the display is still flashing press ◎ button.

2. **Cyclic On-first/ Cyclic Off first mode.**
   a. Keep the ◎ button pressed for 3 seconds.
   b. The display shows ont and starts flashing.
   c. Keeping the ◎ button pressed use △ and ▽ buttons to select ont (On time) or oFt (Off time).
   d. Leave the ◎ button.
   e. Now the display shows the corresponding set value.
   f. Using △ and ▽ buttons change to desired value.
   g. While the display is still flashing press ◎ button.

RESETTING THE TIMER

1. **By front panel:**
   Press the △ and ▽ buttons together for 3 seconds.
2. **Remote reset:**
   TX2 can be reset from a remote push button by shorting the RST and COM terminals.

Specifications subject to change as development is a continuous process.

TX2B_Manual Ver:1.0
www.microsmartindia.com

SETVALUE RECALL

While TX2 is running/ waiting for inputs, set value/ values can be recalled (viewed) without disturbing the timing process.

Briefly press the ⊚ button on the TX2 timer.

1. If the configured mode is `on` or `oFF` the display will show the set value for one second.
2. If the configured mode is `CYo` or `CYF` the display will show `ont` and its set value followed by `oFE` and its set value.

CONFIGURATION RECALL

While TX2 is running/ waiting for inputs pressing the ▽ button for 3 seconds causes to display to show the configuration setting of parameters 1 to 6 one after the other.

CONFIGURATION

TX2 is a multifunctional timer. To make it function in the desired way it has to be *configured*.
Configuration can be done through the front panel buttons.

To **enter into the configuration** mode.
1. Remove power to the instrument.
2. Keep the ⊚ button pressed
3. Apply power.
4. Leave the button when the display shows `CnF`.
5. Navigate the configuration parameters using Ⓐ and ▽ buttons.

To **change parameter value**
6. Press the ⊚ button to enter that parameter.
7. The display shows the value of that parameter.
8. Using Ⓐ and ▽ buttons change to the desired value.
9. Using ⊚ button exit that parameter.
10. Similarly other parameters can be changed.

To **save the changes and exit the configuration mode**
11. Navigate using Ⓐ and ▽ buttons (to the parameter) <u>when the display shows `ESC`.</u>
12. <u>Press the ⊚ button.</u>
13. The TIMER is now updated with the new configuration and is ready to be used.

Configuration Parameters

#	Name.	Setting range for parameter	
1	`tnE` Time Units	`SEC`	**Seconds**
		`n in`	**Minutes**
		`hr`	**Hours**
2	`rnG` Range	`999`	9.99 When **Time units** is set to seconds
		`959`	9.59 When **Time units** is set to Minutes or Hours.
		`999`	99.9
		`999`	999
3	`dir` Direction	`uP`	**UP**: Once the timer starts the display increases from 0 to S*et value*.
		`dun`	**DOWN**: Once the timer starts the display decreases from *Set value* to 0.
4	`nod` Mode	`on`	**On delay**
		`oFF`	**Interval**
		`CYo`	**Cyclic** with **ON** time **first**.
		`CYF`	**Cyclic** with **OFF** time **first**.
5	`FPr` Front Reset	`YES`	Reset by front panel **Enable**.
		`no`	Reset by front panel **Disable**.
6	`oP2` Output 2	`FoL`	Output 2 **follows** Output 1.
		`PLS`	Output 2 **pulses** on for 750ms when *START* input is given.
		`oPP`	Output 2 is **opposite** off Output 1.
7	`rSt` Reset	`nor`	**Normal**: To start a new cycle a *RESET* input has to be given.
		`Aut`	**Auto**: A new cycle can be started without first giving a *RESET* signal.
8	`Str` Start type	`LE`	**Level**: The *START* input can be closed permanently and the timer will always read it as start input present.
		`GAE`	**Gate**: When *START* **is open** the relay state does not change but the **time counting stops**. On make of *START* contact time counting starts from the last time count.
		`EdG`	**Edge**: Timing starts on application of *START* input (Open to Close).
9	`Por` Power on RESET	`YES`	Reset on power fail.
		`no`	Battery backup **ENABLE**
	`ESC` Exit Config	On pressing ⊚ button at this parameter <u>configuration is saved</u> and timer goes into normal operation.	