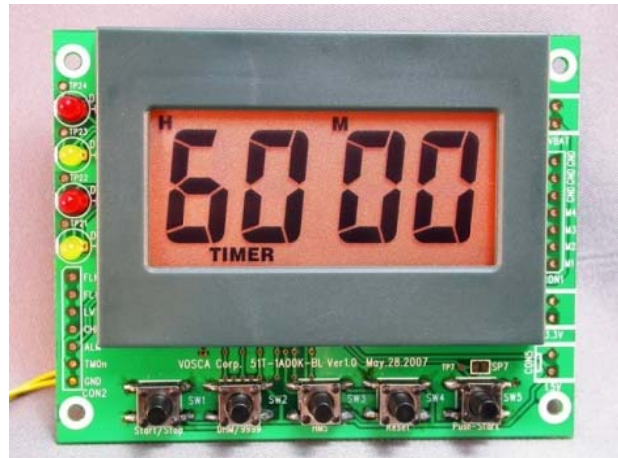


MODULE SPECIFICATION

99 Hours 59 Minutes Countdown/Up Timer Module with LED Back-Light Model No.: 51T-A0H-HM Series

Descriptions

3.3 VDC operated 4 digits, 99 hours 59 minutes maximum capacity countdown and up timer; LED back-light, available in amber, yellow, green, and white color. This is a full function test kit. 5 keys; start/stop, hour, minute, reset, and push-start. Various kinds of output and control poles are designed to provide user comprehensive applications. Battery holder for 2 x UM4 is mounted on the rear side.



Main Features

- Maximum Countdown Capacity: 99 hours 59 minutes
- Maximum Count Up Capacity: 9999 hours
- Resolution: 1 second after counting under 1 hour
- Minimum setting interval: 1 minute
- 5 keys: Start/Stop, Hour, minute, Reset, and Push-On (release-off)
- Automatically memory resets the display to the last set time
- Depending upon the counting status, the display automatically changed to an appropriate format
- Power: 3.3 VDC, external power; 2 x UM4 battery holder mounted on rear side for test purpose
- Endless visual and audible alert
- Various output poles with LED indicator

Specifications

- ✧ Physical Size:
 - PCB Size: 77 x 60 mm
 - Plastic Frame: 58 x 40 mm
 - Thickness: 10 mm (battery holder not included)
- ✧ LCD Display
 - Screen Size: 49.3 x 22.3 mm
 - Number of Digit: 4 digits
 - Digit Height: about 16.00 mm
- ✧ Button: 5 tact s/w, 5 mm height; externally connection is possible
- ✧ Power Source: +3.3VDC, external power; 2 x UM4(AAA) battery holder mounted;
- ✧ Alert Methods:
 - Visual – Endless full LCD blinking
 - Audible – Endless piezo alarm, or PSEA (Power Saving Endless Alert), beep six times, then wait for 10 seconds and repeat
- ✧ Technical Data:
 - Operating Voltage: +1.80 ~ + 3.80 volts
 - Typical Current Drain: 20 μ A in normal condition; 56 mA or higher when LED B/L engaged
 - Operation Temperature: -10 ~ +50 °C
 - Storage Temperature: -20 ~ +60 °C
 - Output Options: please refer next paragraph

Connectors and Applications

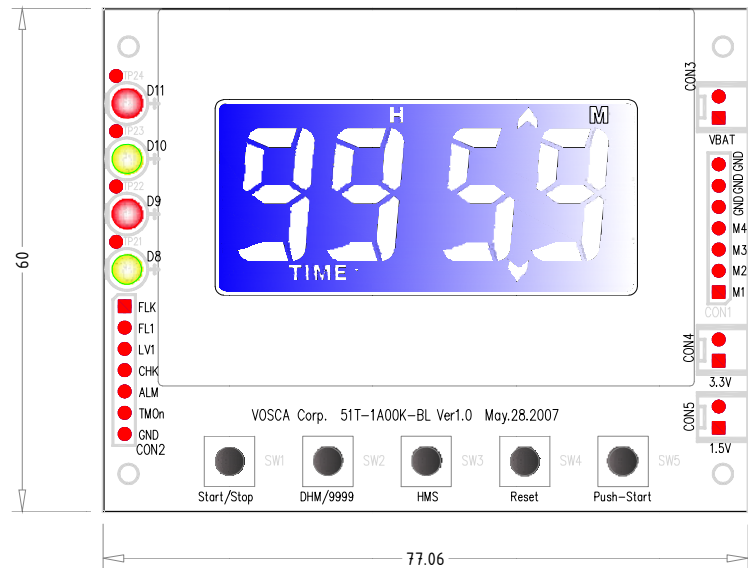
A. Power Connectors

CON3/CON4 – 3.3VDC input
CON5 – 1.5VDC, normally not connected

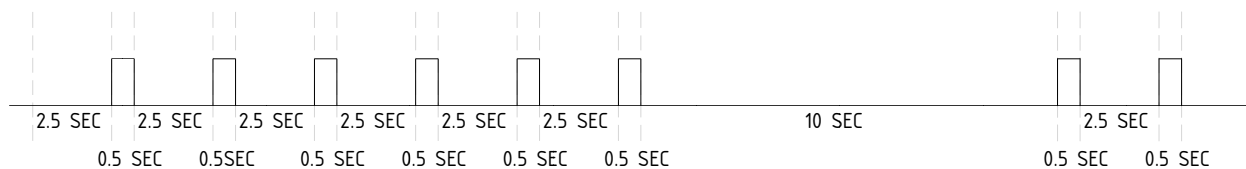
B. Keys (at CON1)

M1 to 1.5V – Start/Stop/Recall
M2 to 1.5V – hour adjust
M3 to 1.5V – minute adjust
M4 to 1.5V – Reading reset

C. Output Poles (at CON2):



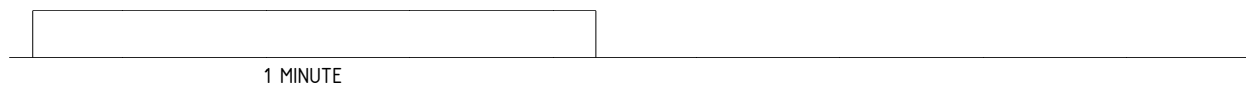
FLK Output (LED D11): When time up, blinking 6 times, then wait for 10 seconds and repeat again continuously until STOP key depressed.



FL1 Output (LED D10): Turn ON every 2 seconds for one minute when time up.



LV1 Output (LED D9): Turn ON for one minute when time up.



CHK: Invalid

ALM Output: Audio alert when time up, same as FLK output, but with 4K Hrzs.

TM0n Output (LED D8): Turn ON when timer engaged.

Represent of Suffix Codes for Additional Features

	Description	Suffix Code	Represent of Feature	Remarks
The 1 st Code	counting method	D	countdown only	upon request
		U	countdown then count up	default
The 2 nd Code	alert method	M	1 minute alarm plus full LCD endless linking	upon request
		P	PSEA, beep 6 times then wait for 10 seconds and repeat, never stop unless "stop" button depressed, plus full LCD endless blinking	upon request
		N	no alarm, plus full LCD endless blinking	upon request
		A	Endless alarm unless "Stop" key is depressed	default
The 3 rd Code	output	N	no output pole	default
		O	all output poles activated	upon request
		L	"LITE" pole activated	upon request
The 4 th Code	Color of LED Back-light	A	amber	
		Y	yellow	
		G	green	
		W	white	
The 5 th Code	pace beeping	s	every 30 seconds beeping during counting	Upon request

Examples:

51T-A0H-HM-UAO-W

means: 99 hours 59 minutes capacity; countdown and count up; endless audible alert; all output pole activated; white color of LED back-light

51T-A0M-HH-UPL-Y-s

means: 9999 hours capacity; countdown and count up; PSEA alert, i.e., beep 6 times, then waiting for 10 seconds and repeat again, never stop beep unless "stop"

depressed; "LITE" output pole only; yellow color of LED back-light; with 30 seconds pace beeping during counting

List of Popular Counting Capacity with Recommend Options

Model No.	Maximum Capacity	Minimum Setting Interval	Counting Method	Alert Method	Output	Back-lite Color
51T-A0H-MS-DMO-A	99 min 59 sec	1 sec	down	for 1 min	all activated	amber
51T-A0H-HM-UPO-Y	99 hr 59 min	1 min	down/up	PSEA	all activated	yellow
51T-A0H-DH-UPO-W	99 days 23 hr	1 hour	down/up	PSEA	all activated	white
51T-A0M-MM-UAN-G	9999 min	1 minute	down/up	endless	no	green
51T-A0M-HH-UAO-A	9999 hr	1 hour	down/up	endless	all activated	amber
51T-A0M-DD-UPL-Y	9999 days	1 day	down/up	PSEA	LITE only	yellow

The Key Operation

The Keys definition as:

A, "Start/Stop" – Press to start , stop, and recall

B, "DHM/9999" – Press to adjust hour

C, "HMS" – Press to adjust minute

D, "Reset" – Press to erase the display reading

E, "Push-Start" – press and hold to start timer counting, release to stop timer counting

When power ON, as well as the buzzer beeping full LCD segment and symbols are displayed for 3 seconds, then turn to show 0^H00^M. Apply B and C keys to adjust the time interval. Press A key to start or stop counting. At stop mode, press D key to reset the reading.

Important: The E key is designed for some special application. This is a start/stop key as A key, but the action just reversed. Press and hold the key to start counting, release the key to stop counting.