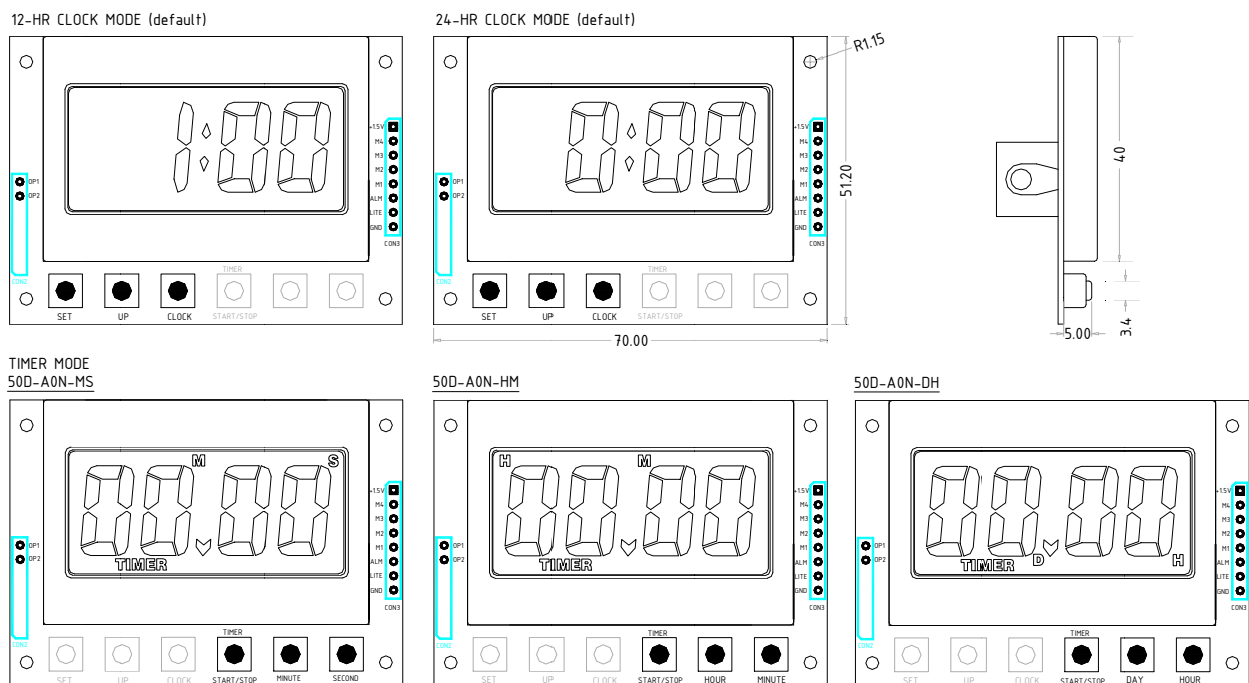# MODULE SPECIFICATION

LCD Clock TIMER Module,
Model No.: 50D-A0N-MS; 50D-A0N-HM; 50D-A0N-DH

The 50D-A0N-MS is 1.50 VDC operated 4 digits, with 16 mm digit height, real time clock module, with 99 minutes 59 seconds as maximum capacity countdown timer. This module includes six buttons, three for clock, and another three for timer. The clock shows hour and minute. Both 12 hr or 24 hr systems are available upon request. For the timer mode, the maximum countdown capacity is 99 minutes 59 seconds. Two other optional capacities 99 hours 59 minutes, and 99 days 23 hours are available too. The timer is featured with audible alarm when counting down to zero. Piezo buzzer with amplified circuit is built-in to provide high volume of beep sound. Along with audible alarm, the full LCD display keeps blinking always when counting down to zero, unless "stop" button is depressed.

Main Features

- Clock, display hour and minute. Available in 12 or 24 hour versions
- Power on display clock mode as default
- Power on display timer mode is possible upon request
- Countdown Capacity: 99 minutes 59 seconds; 99 hours 59 minutes; or 99 days 23 hours
- Connection pads at both sides for external connection of power source, keys, and output poles
- Total 6 keys; 3 keys for clock mode and another 3 keys for timer mode
- Countdown timer
- Count up feature available upon request
- Resolution of time is 1 second
- Automatically swap LCD format during counting process
- Power: 1.5V DC, UM4 battery holder mounted

Specifications

◇ Physical Size:
PCB Size: 70 x 51.2 mm
Plastic Frame: 58 x 40 mm
Thickness: 7 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

◇ Alarm Method: 4 Hz piezo buzzer beeping for 1 minute at timer mode

◇ Button: tact s/w, 5 mm height; externally connection is possible

◇ Power Source: +1.5VDC, use one piece of UM4(AAA), battery holder mounted; externally input is possible

◇ Technical Data:
- Operating Voltage: +1.20 ~ + 1.70 volts
- Typical Current Drain: 3µA in normal condition; 400 µA at alarm mode
- Operation Temperature: -10 ~ +50 °C
- Storage Temperature: -20 ~ +60 °C

Applications and External Connections:

◇ External Power Input:
"+1.5V" and "GND" at CON3

◇ Output Pole:
ALARM – 4Hz piezo for 1 minute when time up
LITE – Deliver Level 1.5V DC during timer activated

◇ Keys:
1. Set – M1 at CON3 connect to OP1 at CON2
2. Up – M2 connect to OP1
3. Clock – M1 connect to OP2
4. Start/Stop (timer) – M2 connect to OP2
5. Min/Hr/Day – M3 connect to OP1
6. Sec/Min/Hr – M4 connect to OP1

Keys Operation

A. The Keys
a. Clock – Press to enter clock mode from timer mode
b. Set – Press to enter each setting mode of real time
c. Up- Press to adjust hour or minute
d. Timer Start/Stop – Press to enter timer mode from clock mode. At timer mode press to start count down or count up. Further press to stop timer.
e. Day/Hr/Min – Press to adjust day/hour/minute
f. Hr/Min/Sec – Press to adjust hour/minute/second

B. How to Set Real Time
Full screen is displayed for 3 seconds when power on, then return to show clock mode 12:00 or 0:00. Press "SET" key to enter setting mode of hour. The "HOUR" on screen will be blanking. Use "UP" key to adjust hour. Press "SET" key again to enter setting mode of minute. The "MINUTE" will be blanking. Use "UP" key to adjust minute. Press "SET" key again to return to normal clock display.

C. How to Set Countdown Timer
At clock mode, press "TIMER" ("d") key to enter timer mode. Use "e" and "f" keys to adjust the time period you are going to set countdown. Press "d" key to start countdown. Press "d" key again to stop timer.

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List of Available Versions

Model No.	Timer Capacity	No. of Keys
50D-A0N-MS	99 min 59 sec	6
50D-A0N-HM	99 hrs 59 min	6
50D-A0N-DH	99 days 23 hrs	6

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