

C SYSTEMS PVT LTD

WATER LEAK DETECTION SYSTEM

WLD4800

USER MANUAL

INTRODUCTION:

The Water Leak Detection System is used to detect the water leak by using sensor cables that are connected to it and displays that information in a 4 x 20 alphanumeric LCD display. The events can be received by the third party BMS through RS485 (MODBUS protocol) communication. This system supports up to 8 Water Leak Sensor Cables.

WIRING CONNECTION:

- Connect the Water Leak Detection System Panel to 230 V AC power source.
- Connect Water Leak Sensor Cables to the PCB connectors (named **ZONE 1** to **ZONE 8**).
- Use 2core x 1.5 sq mm shielded cable to extract the connection for communication with BMS.

OPERATION:

The WLD4800 panel continuously monitors all the sensor cables and updates the status of all zones in LC Display and also to BMS system through RS485 (MODBUS protocol).

In the Main screen, the display shows following information.

WATER LEAK DETECTOR C SYSTEMS (P) LTD SITE NAME	
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- The display shows current date & time and name of the site.
- The display shows the healthy or fault message of each module for every 2 seconds.
- To commission WLD4800 panel, enable the zones which are going to be used.
- The date & time, site name and zone name are programmable.
- There are 10 potential free output to indicate the status of fault and alarm and one potential relay output (12 Volts) for hooter.

Operation of Relays:

- Relay 1 (Zone 1 alarm relay)
- Relay 2 (Zone 2 alarm relay)
- Relay 3 (Zone 3 alarm relay)
- Relay 4 (Zone 4 alarm relay)
- Relay 5 (Zone 5 alarm relay)
- Relay 6 (Zone 6 alarm relay)
- Relay 7 (Zone 7 alarm relay)
- Relay 8 (Zone 8 alarm relay)
- Fire relay
- Fault relay

To activate the hooter, dedicated hooter terminals are provided with 12V & ground, which can be connected to hooter directly.

If water is present on any of sensor cables, the hooter relay, fire relay and corresponding zone alarm relay will be activated. The display shows the alarm message with Zone number and Zone name. For multiple leaks, the display shows the alarm message of each module for every 2 seconds. After the successful location of leak is addressed & source of leak is identified, the sensor cables shall be cleaned with clean dry cloth.

The fault relay and internal buzzer will be activated, if sensor cable which connected to Water Leak Detection System is damaged or disconnected.

Operation of keys:

The total available keys in the system are 'ZONE 1' to 'ZONE 8', 'ENTER' or 'MENU', 'LEFT', 'RIGHT', 'UP', 'DOWN', 'MUTE', 'RESET' and 'EXIT'.

Operation of each key is described following.

ZONE 1	- key is used to isolate the <i>zone 1</i> , while <i>zone 1</i> is in alarm condition, enable zone in zone configuration menu and navigate among alphabets 'a' or 'A', 'b' or 'B', 'c' or 'C' and '1'
ZONE 2	- key is used to isolate the <i>zone 2</i> , while <i>zone 2</i> is in alarm condition, disable zone in zone configuration menu and navigate among alphabets 'd' or 'D', 'e' or 'E', 'f' or 'F' and '2'
ZONE 3	- key is used to isolate the <i>zone 3</i> , while <i>zone 3</i> is in alarm condition and navigate among alphabets 'g' or 'G', 'h' or 'H', 'i' or 'I' and '3'
ZONE 4	- key is used to isolate the <i>zone 4</i> , while <i>zone 4</i> is in alarm condition and navigate among alphabets 'j' or 'J', 'k' or 'K', 'l' or 'L' and '4'
ZONE 5	- key is used to isolate the <i>zone 5</i> , while <i>zone 5</i> is in alarm condition and navigate among alphabets 'm' or 'M', 'n' or 'N', 'o' or 'O' and '5'
ZONE 6	- key is used to isolate the <i>zone 6</i> , while <i>zone 6</i> is in alarm condition and navigate among alphabets 'p' or 'P', 'q' or 'Q', 'r' or 'R' and '6'
ZONE 7	- key is used to isolate the <i>zone 7</i> , while <i>zone 7</i> is in alarm condition and navigate among alphabets 's' or 'S', 't' or 'T', 'u' or 'U' and '7'
ZONE 8	- key is used to isolate the <i>zone 8</i> , while <i>zone 8</i> is in alarm condition and navigate among alphabets 'v' or 'V', 'w' or 'W', and '8'
ENTER/MENU	- key is used to enter into menu options and to save edited values and names
LEFT	- key is used to move cursor to left on edit screen
RIGHT	- key is used to move cursor to right on edit screen
UP	- key is used to change case of letters to upper on edit screen
DOWN	- key is used to change case of letters to lower on edit screen
MUTE	- key is used to mute the Hooter while system under water leak alarm condition and navigate among alphabets 'x' or 'X', 'y' or 'Y', 'z' or 'Z' and '9'
RESET	- key is used to reset the water leak alarm and navigate among alphabet '0' and Space
EXIT	- key is used to exit from the current page

To enable zones, follow the procedure given below:

1. Press **ENTER** key to go to menu page. There are four options.
2. Press **ZONE 2** key to go to zone configuration page.
3. Press **ZONE 1** key to go to zone enable/disable edit page.
4. Press **ZONE 1** key to go to zone 1 selection page.
5. Press **UP** or **DOWN** to navigate through zone 1 selection page to zone 8 selection.
6. Press **ZONE 1** key to enable corresponding zone on zone selection page.
7. Press **ZONE 2** key to disable corresponding zone on zone selection page.

To enter site name, follow the procedure given below:

1. Press **ENTER** key to go to menu page. There are four options.
2. Press **ZONE 1** key to go to site information page.
3. Press **ZONE 1** key to go to site name edit page.
4. Press **UP** key for upper case letters.
5. Press **DOWN** key for lower case letters.
6. Edit the site name by pressing key **ZONE 1** to **ZONE 8**, **MUTE** and **RESET**
7. Press **ENTER** key to save the site name or press **EXIT** key to escape from site name edit page without saving.

To enter zone name, follow the procedure given below:

1. Press **ENTER** key to go to menu page. There are four options.
2. Press **ZONE 2** key to go to zone configuration page.
3. Press key **ZONE 2** to go to zone name showing page.
4. Press **UP** or **DOWN** to navigate through zone 1 name page to zone 8 name page.

5. Press **ENTER** key to go to zone name edit page of corresponding zone name showing page.
6. Press **UP** key for upper case letters.
7. Press **DOWN** key for lower case letters.
8. Edit the zone name by pressing key **ZONE 1** to **ZONE 8**, **MUTE** and **RESET**
9. Press **ENTER** key to save the zone name or press **EXIT** key to escape from zone name edit page without saving.

To set date and time, follow the procedure given below:

1. Press **ENTER** key to go to menu page. There are four options.
2. Press **ZONE 3** key to go to clock settings page.
3. Press key **ZONE 1** to go to date edit page. We can edit date, month and year in this page.
4. Press key **ZONE 2** to go to time edit page. We can edit hour, minute, seconds and meridian in this page.
5. Use keys **ZONE 1** to **ZONE 8**, **MUTE** and **RESET** to edit date and time and use **ZONE 1** and **ZONE 6** keys to edit meridian.
6. Press **ENTER** key to save date or time or press **EXIT** key to escape from date edit page or time edit page without saving.

To set slave device ID for WLD4800 (communication with BMS), follow the procedure given below:

1. Press **ENTER** key to go to menu page. There are four options.
2. Press **ZONE 1** key to go to site information page.
3. Press key **ZONE 2** to go to device ID edit page.
4. Use keys **ZONE 1** to **ZONE 8**, **MUTE** and **RESET** to edit device ID.
5. Press **ENTER** key to save device ID or press **EXIT** key to escape from device ID edit page without saving.