MODBUS Values:

Module Not Configured	-	0
Cable Length Not Updated	-	1
Healthy	-	2
Sensor Cable Fault	-	3
Alarm	-	4
Communication Fault	-	5
Leak Location	-	xx in Centimeters (multiply by 0.01 to get distance in meters)

USER MANUAL FOR

ADDRESSABLE WATER LEAK

DETECTION SYSTEM

MODEL NO: AWLD2400-TS

DESIGN, ENGINEERING AND MANUFACTURING BY

C SYSTEMS PVT LTD. CHENNAI INDIA

www.csystemsindia.com

8 x programmable relays

alarm relay fault relay fire relay Hooter

FRC cable connection to TFT Display

RS 485 TO BMS (USE 2C X 1.5 SQ.MM SHIELDED CABLE)

RS 485 TO SLAVE MODULES (USE 2C X 1.5 SQ.MM SHIELDED CABLE)

Power connection
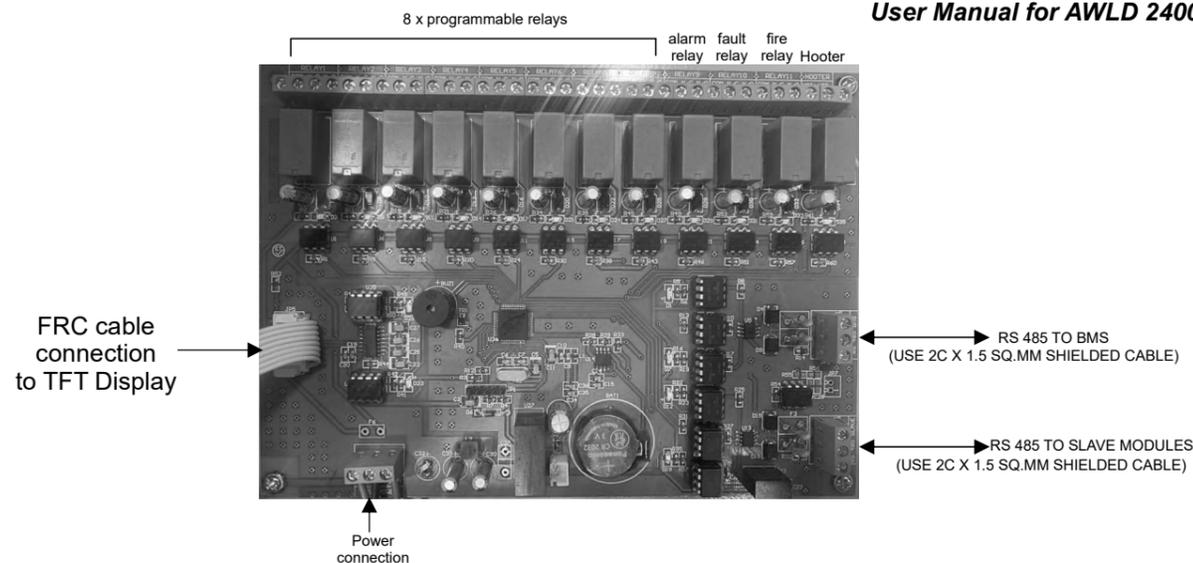
The above image illustrates the connection details for AWLD 2400 -TS panel

Switch on the panel, and wait for the LOGO. after 3 seconds, main screen appears in the TFT display as shown below

Scan, Fault & History screens do not require password.
Menu screen requires password. Admin password is 3929

The main screen has the following features.

1. **Menu:** To configure the module & sensor cable parameters
2. **Scan:** To scan the status of modules & sensor cables in the network.
3. **Fault:** To view the list of faulty modules & sensor cables in the network
4. **History:** To view the fault & alarm events with date & time

Module status are displayed in the main screen as follows

1. **Installed:** Total modules installed & configured in the network
2. **Healthy:** Total modules in healthy condition
3. **Comm fault:** Total modules not communicating with AWLD2400-TS
4. **Sensor fault:** Total sensor cables faulty / not configured.

After successful Login, the Configuration screen appears as shown.

1. **Site Name:** The name typed and saved in this text box will appear in the main screen on the Top of the TFT Display.

2. **Modules Quantity:** Total modules installed in the network. If the value is 0, then **Modules parameters** menu is not accessible.

3. **System Address:** The Slave Address for the TFT panel to communicate with BMS.

4. **Baud Rate, Parity, Date & Time** are configured as per requirement

5. **Save:** To save the configured parameters in the screen.

6. **Exit:** To Exit from the screen.

Modules Parameters screen appears as shown

1. **Module ID:** The address of the modules configured is displayed. This field is not editable.

2. **Relay 1-8:** The radio button is used to configure the programmable relays. The selected relay is triggered when the master receives an alarm. None is selected if no relay has to be triggered.

3. **Save** & **Exit** keys are used to save the parameters and exit screen.

4. **Prev** & **Next keys** are used to navigate the module parameters

When an alarm is sensed in the sensor cable, the Module ID, Location Name & distance at which Leak is reported in terms of meters are displayed in the screen with exact date and time.

The ALARM animation blinks to attract the user's attention. The programmed relay, Fire relay & hooter are triggered.

If more than one alarm is received by the TFT panel, a text " More Alarms " is highlighted.

Floor Plan view key is optional feature, & currently not supported.

Prev & Next keys are used to navigate the alarm screens of the corresponding modules.

Mute Key is pressed to silence the hooter output.

Reset All key will reset all active alarms in the network.

Note: Before pressing **Reset All** key, Ensure that leak origin & source are identified, rectified & sensor cables are cleaned with dry cotton cloth. Ensure the sensor cable is completely dry at any part otherwise, continuous alarms will be generated.

When **Scan key** is pressed in the main menu, the module status screen appears as shown.

The TFT panel scans for the available modules & sensor cables configured and report the status of all the modules. Communication fault will be reported if the configured module is not communicating. If the sensor cable is connected and configured in the module, the length of the sensor cable is displayed in meters. If sensor cable is not configured / connected, the length is displayed as "0".

When **Fault key** is pressed in the main menu, the Fault list report screen appears as shown.

The TFT panel displays the current list of faulty modules & sensor cables connected in the network. The types of faults are module communication fault, sensor cable fault & Sensor cable not updated. The fault report parameters are SI. No, Module ID, Location name & type of fault.

When **History key** is pressed in the main menu, the History list report screen appears as shown.

The TFT panel displays the History log events occurred in the system. The latest event occurred is displayed in the first line. The types of events are :
1. Communication Fault from Module ID with date & time.
2. Alarm for Module ID with Location name & Leak location in meters with date & time.
3. Sensor Cable Fault from Module ID with date & time
4. Reset from master panel / Module with date & time.

BMS Integration Configurations:

The AWLD2400-TS has a built in MODBUS RTU port available for BMS Integration. The configuration for MODBUS RTU is programmed in the configuration menu. The possible parameters are as follows.

Protocol mode	-	RTU
Data bits	-	8
Parity	-	None / Odd /Even
Stop bit	-	1
Start bit	-	1
Baud rate	-	9600 / 19200 bps

Description	Address	Function Code	Read / Write
Zone Status (ID : 1 to 32)	1001 ~ 1032 for ID 1 to 32	0x03	Read
Leak Location (ID : 1 to 32)	2001 ~ 2032 for ID 1 to 32	0x03	Read