



EMAX CONTROL SDN BHD

1241858-H

GST Reg: 001753640960

Lot 28242

Kg Jaya Industrial Area

47000 Sungai Buloh

Selangor Darul Ehsan, Malaysia

Tel: 03-6145 3333 | Fax: 03-6156 9311

MANUAL (OPS)

SP100 WATER LEVEL MONITORING OPERATION MANUAL



revision v1.0

REVISION LIST

REV	DATE	AUTHOR	COMMENT
V1.0	11/12/18	KAH	INITIAL DRAFT FOR APPROVAL

COMPATIBILITY LIST

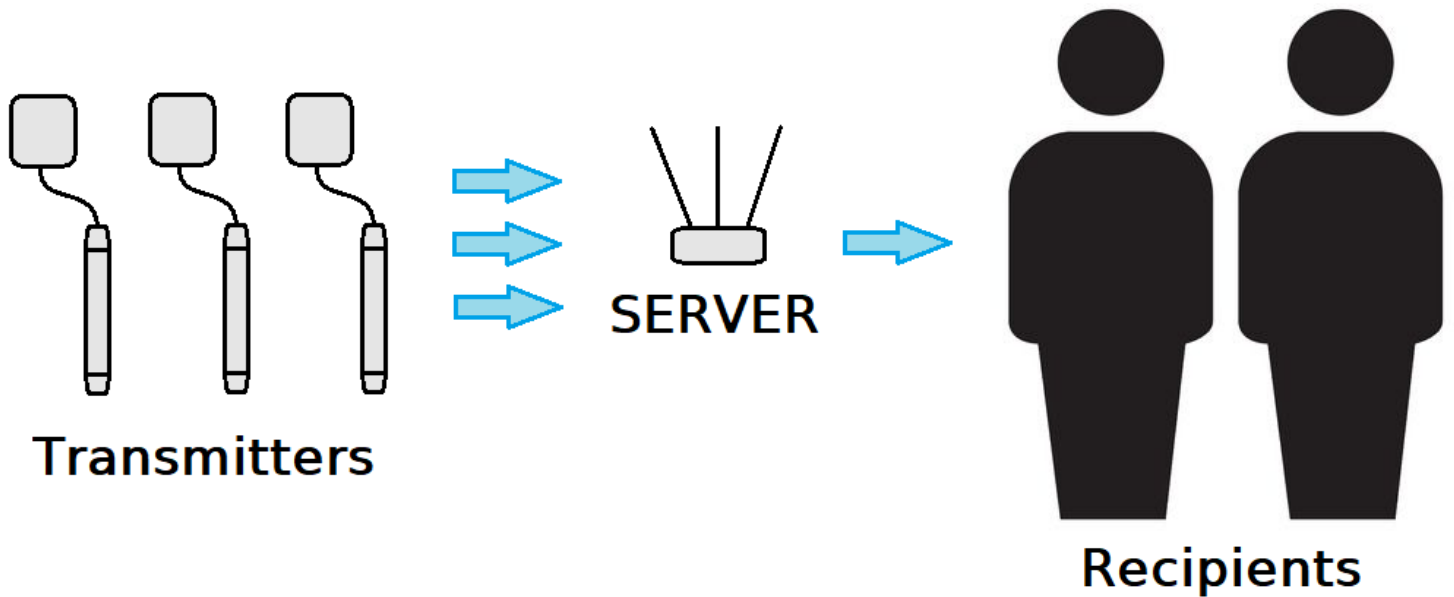
NAME	TYPE	REMARK
CONTROL PANEL TYPE	CP	LEVEL MONITORING
VSD TYPE	VSD	N/A
HMI TYPE	HMI	N/A
CONTROL TYPE	XXX	FIXED PROBE, 2 POSITION
SENSOR TYPE	SENS	HALL EFFECT, NORMALLY OPEN (NO)
TRANSMITTER TYPE	TRNS	TCAM 52, SCHNEIDER SP50

DISCLAIMER

- Emax Control does not warrant that the hardware will work properly in all environments and applications, and make no warranty and representation, either implied or expressed, with respect to the quality, performance, merchantability, or fitness for a particular purpose.
- Emax Control has made every effort to ensure that this Manual is accurate; Emax Control disclaims liability for any inaccuracies or omissions that may have occurred.
- Information in this Manual is subject to change without notice and does not represent a commitment on the part of Emax Control. Emax Control assumes no responsibility for any inaccuracies that may be contained in this Manual. Emax Control makes no commitment to update or keep current the information in this Manual, and reserves the right to make improvements to this Manual and/or to the products described in this Manual, at any time without notice.
- If you find information in this manual that is incorrect, misleading or incomplete, we would appreciate your comments and suggestions.
- For more information, visit <https://www.emaxcontrol.com>

INTRODUCTION & CONTROL PHILOSOPHY

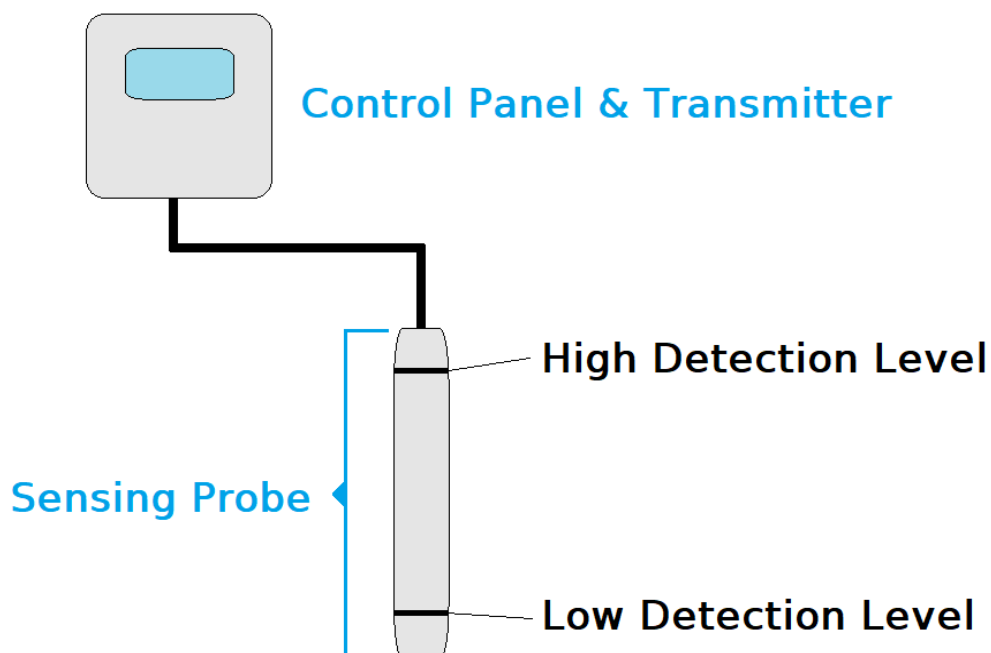
Thank you for your purchase of our water level monitoring (WLM) solution. It has been designed for maximum performance as well as providing excellent system response in all situations. This WLM system is designed to be independant of external power supply and are suitable to be installed in harsh environment such as remote areas or under manhole covers. Each Transmitter probe comes with 2 levels of monitoring for maximum flexibility.



The entire WLM is scalable and flexible. There are no practical limit on the number of transmitters as long as the GSM network can cope with the SMS traffic. A server collects all alarms/SMS and reforwards the SMS to authorized recipients. There are 2 reasons this method is used;

1. It helps the transmitters to save battery because the transmitters only need to send one alarm sms to the server instead of sending to each recipient.
2. Recipient list can be modified easily on the Server. Access to transmitters are no longer needed once they are deployed.

The WLM consists of 2 major parts; the control panel where the transmitter is located and the sensing probe. The probe is mounted at the desired water level position and the control panel is mounted at a suitable location (good GSM signal level is highly desirable).



The probe is designed to be submerged into the water in events of flood. If water raises above or falls below Low detection level, a SMS will be sent to SERVER. Likewise, if water raises above or falls below High detection level, a second SMS will be sent to SERVER.

A standard WLM kit consists of the following items:

1. Control Panel
2. Water Level Probe
3. Infrared Communication Cable
4. Communication Software CD/USB drive

INITIAL STARTUP

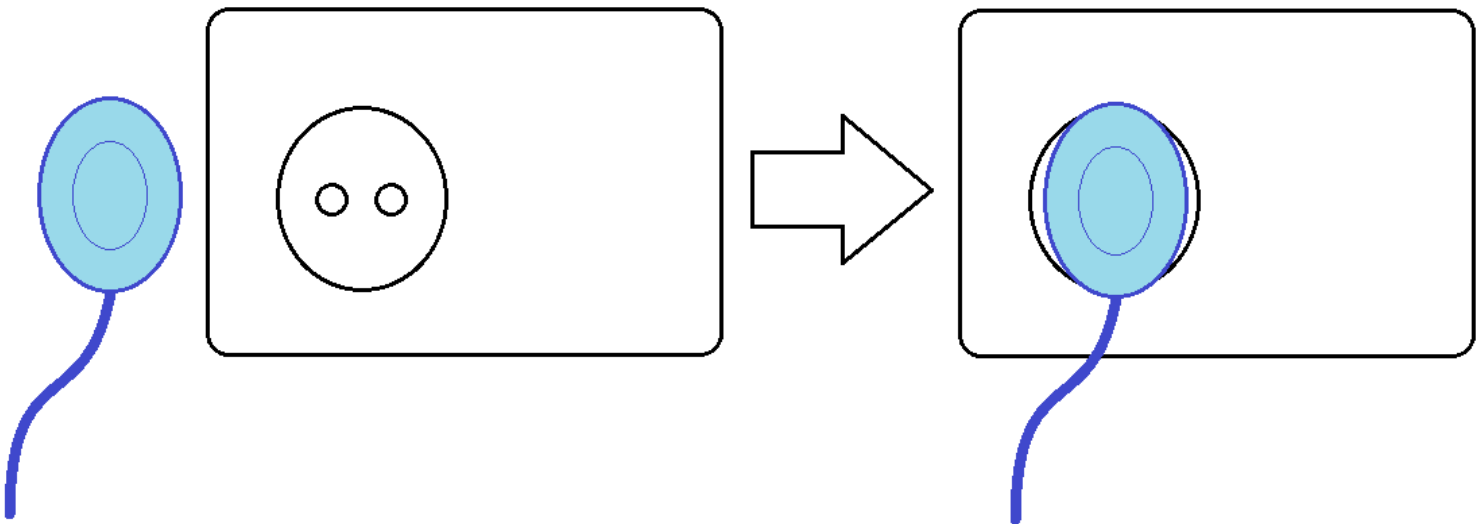


WARNING! IF YOU ARE UNSURE OF ANY STEPS OR PROCEDURES, CONTACT YOUR SALES REPRESENTATIVE IMMEDIATELY. INCORRECT SETTINGS OR COMMISSIONING MAY LEAD TO NON-FUNCTIONING SYSTEM!

Before attempting to commission the system, ensure the transmitter cables are disconnected at their terminals inside the control panel. They are labelled 1,2 and 3 for easy identification.

Prepare the SIM card and make sure it is active and password free. Testing the SIM card in a spare phone is highly recommended before proceeding. Insert the SIM card into the transmitter module.

Place the control panel in a safe and flat surface. Open the door and place the infrared communication over the comm. port of the transmitter. Refer to diagram as follows:



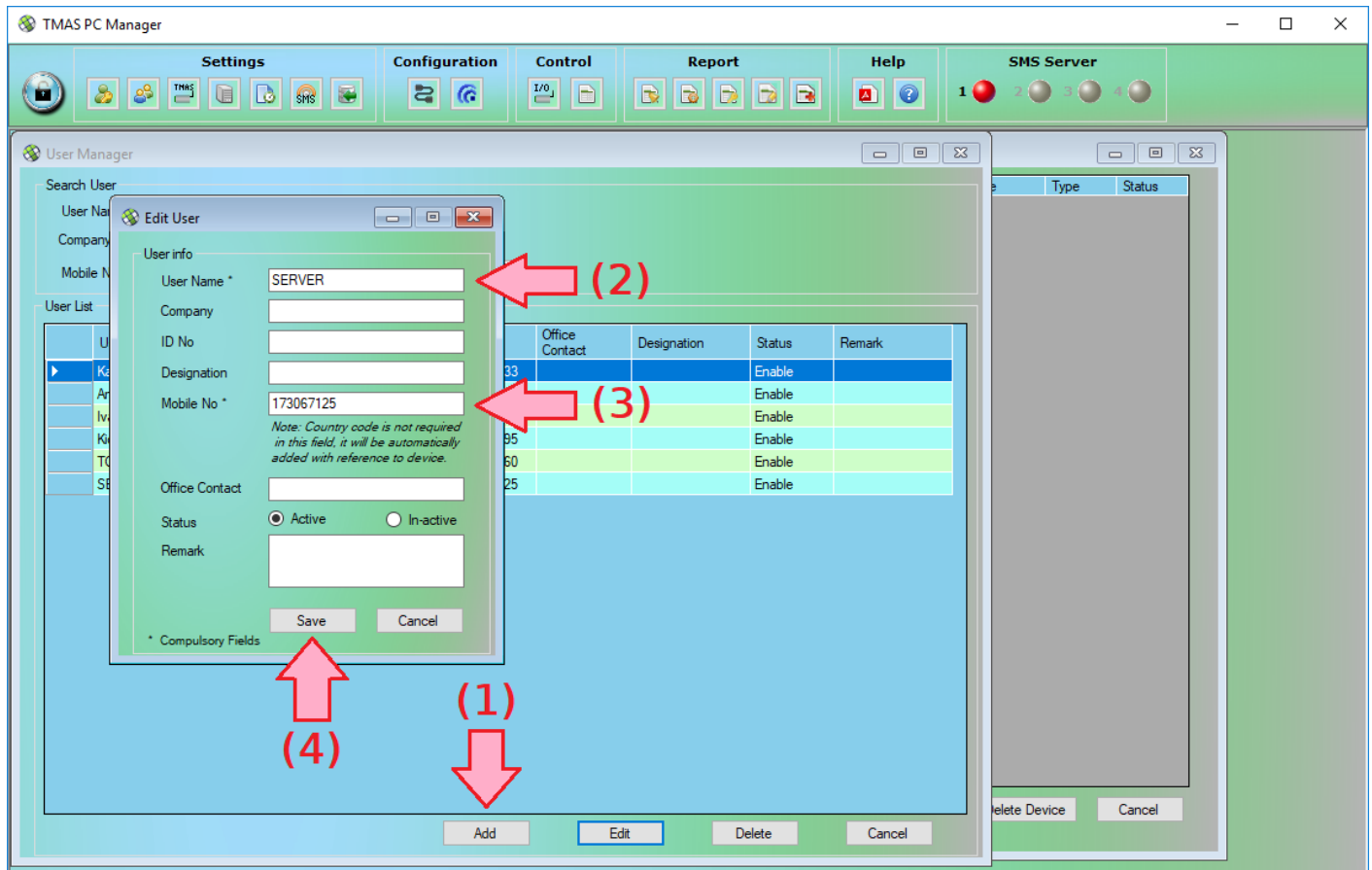
The communication cable should click in place via embedded magnet.

Next, install the communication software from CD or USB drive and launch the setup program.

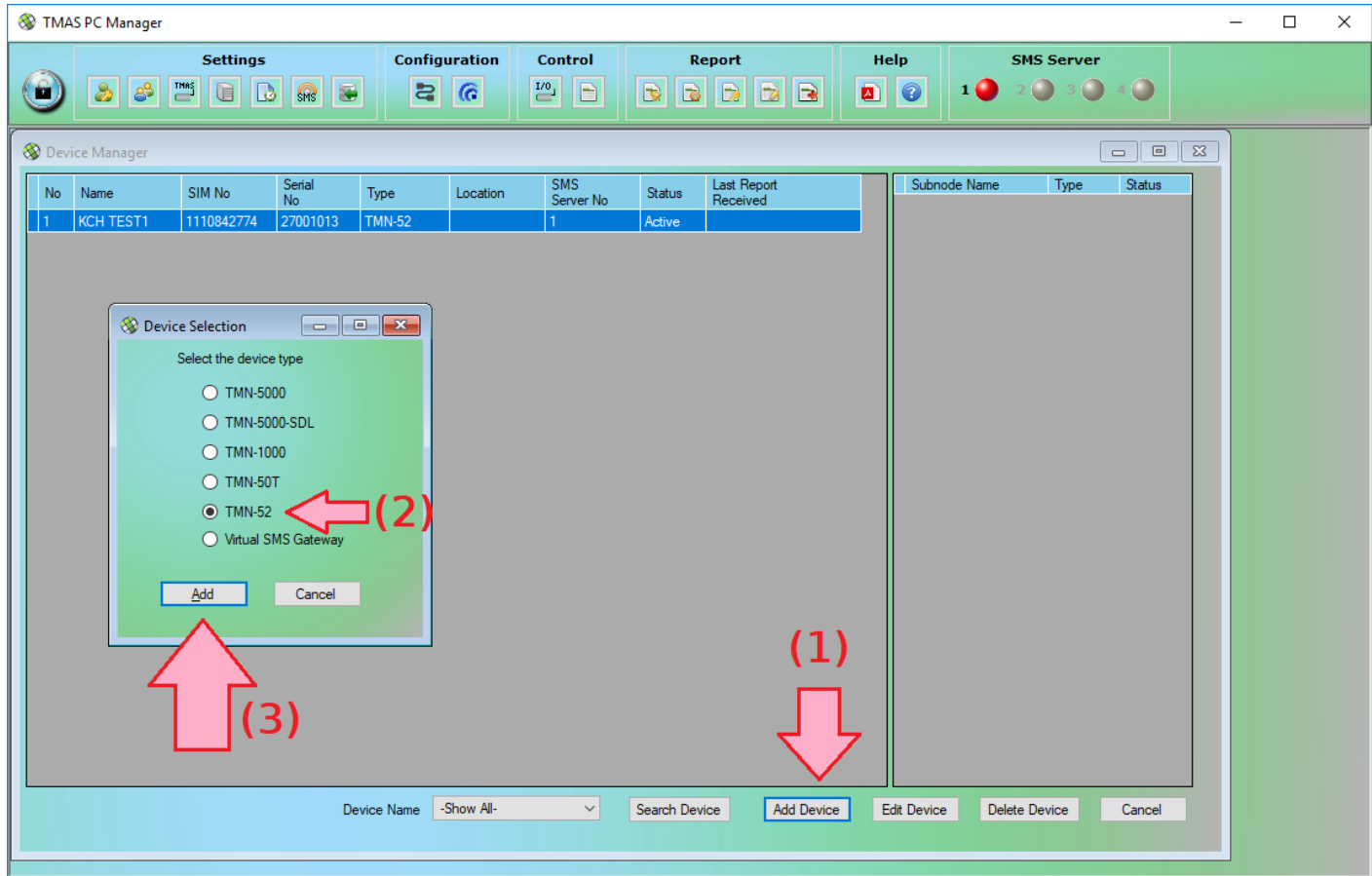
Click on Log in and hit User (Admin) and Password (Admin) as follows:



First step is to add a server. This is the central SMS number for further processing and forwarding. Contact your sales representative for central SMS number. The Central SMS number is unique to each customer/project site. Add a user name SERVER and Mobile no. Click Save.



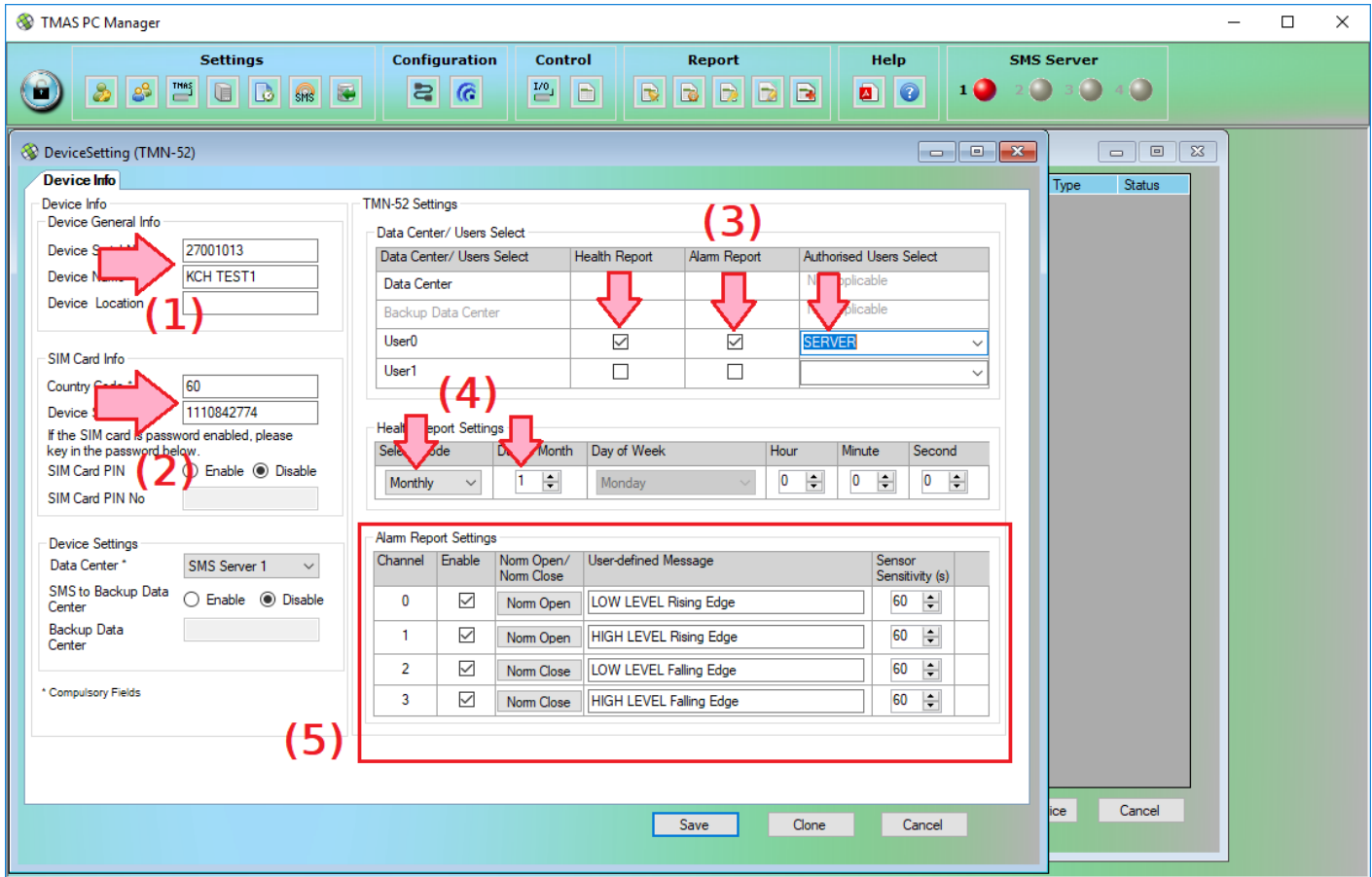
Click Add Device and Select TMN-52 from the list. Click OK and a new window will appear.



Next, key in the following device information:

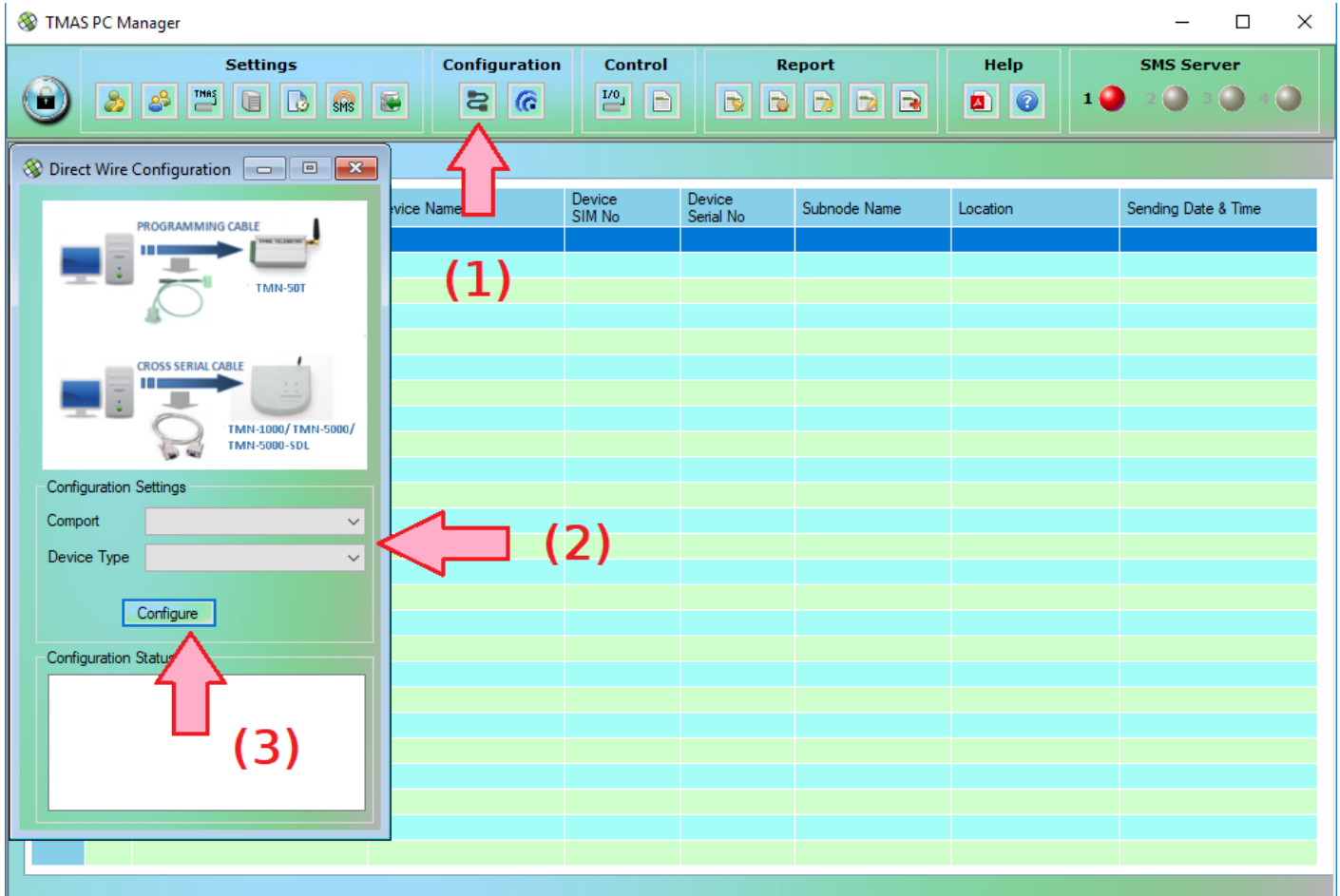
- (1) Device serial number := [Get this information from your sales representative].
- (1) Device Name := Name for Device
- (2) Country Code := 60
- (2) Device SIM Card number := [Enter without country prefix].
- (3) Tick both checkbox for Health Report and Alarm Report and Select Authorised User [SERVER].
- (4) Select Monthly health report and 1 as first day of the month.
- (5) Fill in as per image below:

Click Save.



DOWNLOADING SETTING TO TRANSMITTER MODULE

Click on Direct Wire Connection. Next, choose your Port (COM) and Device as TMN-52. Click Configure and wait for the progress bar to fill up.



INSTALLATION OF CONTROL PANEL

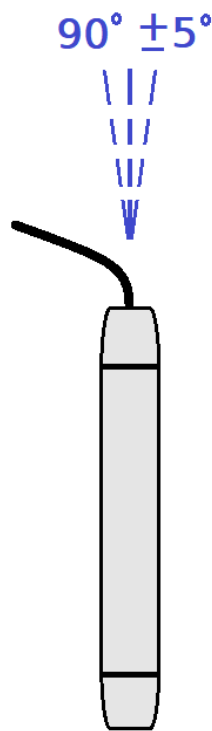
It is recommended that all settings to be done before installation due to possible space constraints of installation area. Control panel shall be installed via mounting flaps via common construction methods (wall plug or anchor bolts) onto a solid surface. Signal strength can be checked prior of installation by using a mobile phone to ensure maximum connectivity.

If your control panel is equipped with an external antenna, it has been designed to point downwards to minimize water damage.

INSTALLATION OF PROBE

Ensure all wires are disconnected from the control panel terminals before installation. Failure to do so may cause the transmitter to transmit repeatedly which can drain the built-in battery.

Install the probe in upright position. The probe is very sensitive to tilt angles and recommended installation shall not exceed $\pm 5^\circ$.



Install the probe such that the lower marker is at the desired monitoring level.

Connect the cable of the probe to the panel via supplied cable gland. Cable gland must be used to ensure waterproof.

Terminate the cable to the terminal block labelled 1,2 and 3.

ADDITIONAL INFORMATION

To add or remove recipients, contact your system integrator. It is recommended to keep the number of recipients below 10 users to avoid network overcrowding.

The built-in battery is designed to last 4 years with monthly reporting. Due to environment uncertainties, the practical lifespan can be expected to be between 1 to 2 years. If the installation area is prone to flooding, the lifespan will be further reduced due to the frequency of alarms.

The cable supplied with the transmitter is weatherproof and is suitable for direct connection without additional conduit or cable tray.

For any clarifications or questions, contact your system integrator.



www.emaxcontrol.com