

## Installation Guide for the Flecto Sense 2 Channel Radio System



We provide an integrated smart water solution that focuses on providing clarity, connectivity and ease of use to all customers.



+27 813 063 059



info@flecto.co.za



www.flecto.co.za



269 Annette van Zyl, Garsfontein, Pretoria, South Africa

## 1. There are 3 unit types:

- Transmitter FLTX-868
- Receiver FLRX-868
- Repeater FLRPT-868

## 2. Mounting holes and physical installation

- All 3 units have the exact same enclosure with the same mounting holes and dimensions
- Removing / Replacing the faceplate
  - The 4 corner screws are of a quick release type.
  - Apply pressure to the lid screws with a star screwdriver and turn 90 deg anti-clock wise to unlock the faceplate and 90 deg clockwise to lock the faceplate . Refer to Fig.1 below.



**Fig.1**

**NOTE: Be careful when removing the faceplate, there is a ribbon cable connected to it from the controller PCB for the indicator LED's on the faceplate. The ribbon cable can be removed from the faceplate by pulling the connector carefully off the LED PCB on the faceplate. Refer to Fig.2 below.**



Fig.2

When replacing the ribbon cable it must be replaced in the same direction only. Refer to Fig.2. If the ribbon cable is reconnected wrongly the LED's will not function.

Do not remove the ribbon cable from the controller PCB

Do not remove the radio connection cable between the controller PCB and the radio module. If this cable is removed and replaced wrongly it can cause damage to the controller PCB or the radio module.

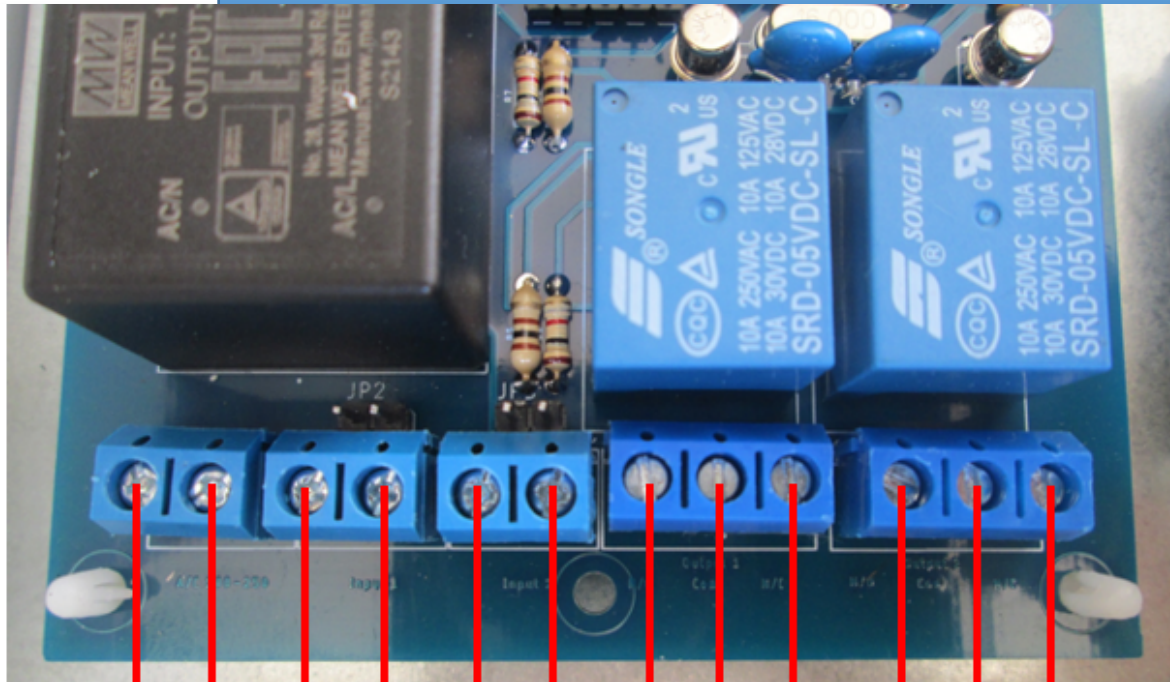
- 4 x 4mm screws to be used on all 4 corners, accessible only when the faceplate is removed. Screw type and length is dependent on the material or surface where the unit will be attached to.

**NOTE: Mounting screws are not included**

**Ensure that no material debris such as metal particles or dust falls on the circuitry of the unit during the drilling and mounting process.**

### 3. Wiring connection

- **NOTE: Before powering any of these units, be it the Transmitter (FLTX-868), the Receiver (FLRX-868) or the Repeater (FLRPT-868) ensure that the antenna is properly connected to the unit. The antenna is supplied with the units on delivery.**
- **Only use multi-strand wire with a maximum of 1mm diameter wire for the Live and Neutral connections and a maximum of 1mm twisted pair screened wire for the Inputs and Outputs. DO NOT USE normal electrical wiring on any of the connections to the unit!**
- **The antennas must NEVER be installed in a steel enclosure such as distribution cabinets etc. This will attenuate the radio transmission and result in NO or Weak transmission causing the communication of the system to be intermediate and / or unreliable.**



L N Input Input N/O Com N/C N/O Com N/C  
1 2 Relay 1 Relay 2

- **Extender cables and external antennas can be ordered if needed as well as Long Range Antennas. These are not included but can be ordered separately if needed.**
- Best practice is to install and power the Transmitter (FLTX-868) unit first before installing the receiver (FLRX-868) or Repeater (FLRPT-868) units.
- The power connection to these units must be from a stable supply point that is connected to the grid and if installed, emergency power source such as generator circuits.
- Ensure that the 230VAC and the desired Input and Output connections are made correctly before powering the unit and if any changes are to be made to the Input / Output connections of the unit ensure that the main power to the unit is switched off completely. Power can then be restored once the changes are made.
- Refer to Fig.3 above for correct connection to the controller PCB  
**NOTE: The Live / Neutral 230VAC connection terminal is on the left of the controller terminal strip. Wrong connection can cause serious and permanent damage to the unit.**

- **The power cable to the unit must at all times be secured by a 5A fuse supply (this is not include)**
- **Note: The Inputs 1 and 2 to the controller PCB must be a “dry contact” and not a voltage line, in other words from a physical switch, timer or relay contact. A live input will permanently damage the controller PCB.**
- The Outputs 1 and 2 are normal relay outputs including N/O, Common and N/C and can be used for desired switching requirements. For correct connection refer to Fig.3 above. These relay outputs are specified for 10A on 230VAC devices but recommended for maximum 2A AC or DC loads. If larger loads are to be controlled we recommend using an external relay or contactor to carry the load. For more detail on the applications for these units refer to the Functional Specification document.
- Both the Transmitter (FLTX-868) and the Receiver (FLRX-868) units have 2 x Relay Outputs but only the Transmitter (FLTX-868) have active Inputs (dry inputs). The Repeater (FLRPT-868) have no Inputs or Outputs. Its function is only to extend the communication range if needed. As reference the Line of sight range is approximately 5km line of sight. The repeater (FLRPT-868) only have to be powered from the 230VAC within proper range from the Transmitter (FLTX-868) unit and it's Radio LED (blue) must flash in constant 1 sec intervals to indicate proper reception from the Transmitter (FLTX-868).The Repeater (FLRPT\_868) will also indicate on its face plate what conditions with respect to Relay 1 and 2 is repeated on the faceplate Relay1 or Relay 2 LED's (Red)
- Once the Transmitter (FLTX-868) is connected and powered ensure that the Radio Indicator LED (Red) flashes at a 1 sec interval rate. This indicates that the Transmitter (FLTX-868) is in operation. Then only start with the Receiver/s (FLRX-868) installation.
- Ensure the Receiver/s Radio LED (Red) is flashing in 1sec intervals, this will then indicate that the transmission from the Transmitter (FLTX-868) is in range and receiving proper communication.

**NOTE: If the Receiver's (FLRX-868) Radio LED is not flashing constantly in a 1sec interval it reflects an unstable reception from the Transmitter (FLTX-868) and a Repeater (FLRPT-868) needs to be installed in-between.**

**If the Receiver (FLRX-868) unit Radio LED is completely OFF then either it is out of range from the Transmitter (FLTX-868) unit or the Transmitter is not powered.**

- Multiple Receiver (FLRX-868) units can be connected to the Transmitter (FLTX-868) depending on the original order. Additional Receivers (FLRX-868) units can be added on order but the Net ID indicated on the respective Transmitter (FLTX-868) unit must be supplied along with the order of additional Receivers and or Repeaters. The Units are configured and paired prior to delivery and will not operate with other Transmitter (FLTX-868) units not intended.
- After the installation of the system is completed it is recommended to test the entire system by triggering the relative Transmitter (FLTX-868) Inputs and verify the desired Outputs from the Transmitter (FLTX-868) unit and it's respective Receiver (FLRX-868) units to switch correctly by monitoring the Relay 1 and Relay 2 indicator LED's (Red) on their faceplates relative to the Input conditions of Input 1 and 2 of the respective Transmitter (FLTX-868) unit.

**4. Note: The correct wiring and functionality of external Input triggering devices such as timers, switches and relays as well as the external Output devices such as Relays, contactors, lights etc. are the responsibility of the installer / customer. Any damage caused to the unit as the result of faulty external device connections will be the responsibility of the installer / customer.**

For any assistance, orders, advice or information on these or other products and solutions you can contact us on [info@flecto.co.za](mailto:info@flecto.co.za)

You can also visit our website on [www.flecto.co.za](http://www.flecto.co.za) for more information on our other products and solutions.