



LIGHT INDUSTRIAL

INSTRUCTION MANUAL

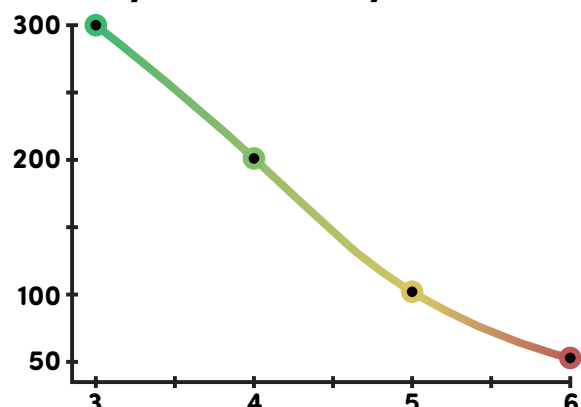


Table of Contents	1
Datasheet	2
Radio Specifications	2
Power, Physical & Environment	2
Compliance	2
Battery Life vs. Daily Activations	2
Radar Read Distance	2
Magnetometer Range	2
Setup Notes	3
1. Mounting Location	3
2. Electrical Interference Warning	3
3. Interacting with the e-LOOP Using the Included Magnet	3
4. Unit Fitment	3
5. Moving Calibrated e-LOOP	3
6. Operational Mode Definitions	3
Instructions	4
Step 1 - Coding to e-TRANS	4
Option 1 Short Range Coding	4
Option 2 Long Range Coding	4
Step 2 - Mounting	4
Step 3 - Calibration	5
Un-Calibration	5
Connecting with e-CONNECT App	5
Changing Mode	6
Entering Menu	6
Exit Mode	6
Parking Mode	6
Presence Mode	6
Changing Mode with e-CONNECT APP	7
Confirmation Mode	7
Resetting e-LOOP to Factory Defaults	7

Radio Specifications

Frequency	433.39MHz
Modulation	FSK
Bit Rate	100kbps
Bandwidth	50kHz
Antenna Type	PCB
Nominal Output Power	14dBm
Receive Sensitivity	-126.2dBm
Security	128-Bit AES Encryption
Spurious Emissions	30 - 1000MHz: < -56dBm 1 - 12.75GHz: < -44dBm 1.8 - 1.96GHz: < -58dBm 5.15 - 5.36GHz: < -51dBm

Battery Life vs. Daily Activations

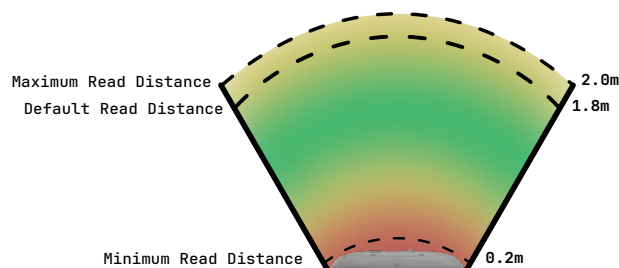


NOTE: Battery Life is dependent on many factors, including daily activations, time used per activation, radar range & external conditions.

Power, Physical & Environment

Power	2 x 3.6V 3000mAh
Dimensions	178 x 178 x 24mm
Weight	800g
Environment	- Designed for above ground mounting - IP68 Ingress Protection
Operating Temp	-40°C - 80°C
Standby Power	14µA
Activation Power	40µA

Radar Read Distance

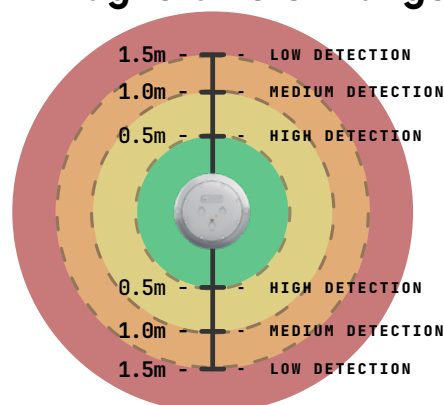


Radar detection range. Spanning from a 60° FOV from the e-LOOP, these are range zones. The Minimum Read Distance is 0.2m. The Default Read Distance is 1.8m & the maximum Read Distance spans up to 2m.

Compliance

Safety	Tested to CE
EMC	Tested to: EN 301 489-1 V2.2.3 "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for ElectroMagnetic Compatibility" Including a) Emissions to EN 55032 "Electromagnetic compatibility of multimedia equipment". b) Transmitter and receiver test to EN 300 220-1 V3.1.1 'Short Range Devices (SRD) operating in the frequency range 25MHz to 1000MHz; Part 1: Technical Characteristics and methods of measurement'. c) Immunity Tests to EN 301 489-1

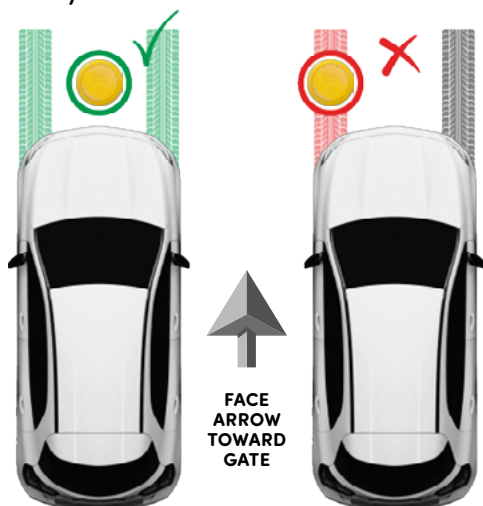
Magnetometer Range



e-LOOP Fitment/Setup Notes

1. Mounting Location

NOTE: Ensure e-LOOP Sensor is fitted Centrally to the most frequently driven path. This avoids unnecessary drive-overs.



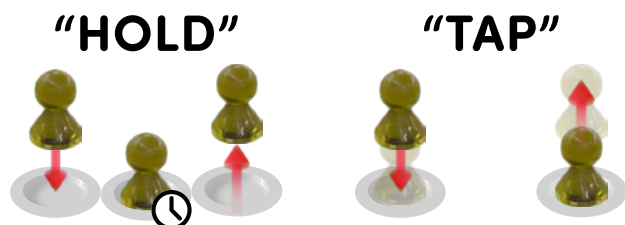
2. Electrical Interference Warning

NOTE: Do not mount e-LOOP sensor in close proximity to high voltage cables. E.g powerlines. Electromagnetic interference may affect e-LOOP functionality.



3. Interacting with the e-LOOP Using the Included Magnet

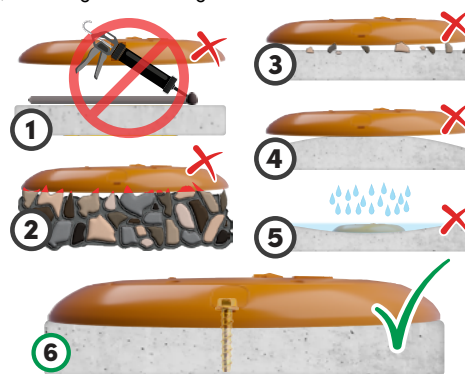
NOTE: When interacting with e-LOOP magnetic buttons, note the difference between "Hold" & "Tap"



4. Unit Fitment

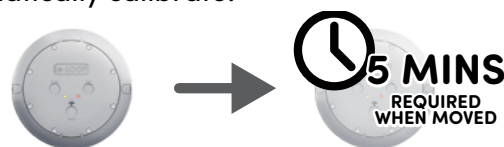
Ensure e-LOOP is fitted to a clean, level & secure surface. Using the included fasteners and free of any flood-prone areas.

Fig. 1 Securing e-LOOP Sensors to the ground using adhesives, may detrimentally affect static & dynamic load capacity.
 Fig. 2 & 3 Do not mount e-LOOP Sensors to irregular terrain; rocks, debris or sharp terrain may pierce plastic casing under load.
 Fig. 4 Do not mount e-LOOP Sensors to uneven terrain. Improper mating surfaces may affect calibration or damage the e-LOOP
 Fig. 5 Do not mount e-LOOP Sensors in flood areas without adequate drainage. Submerged sensors may result in inconsistent activations, affected calibration, water ingress or soiling.



5. Moving Calibrated e-LOOP

NOTE: Once Calibrated, the e-LOOP will require re-calibration when moved. Otherwise a 5-minute wait time is required for the sensor to automatically calibrate.



6. Operational Mode Definitions

NOTE: The e-LOOP Light Industrial is capable of 3 operational modes

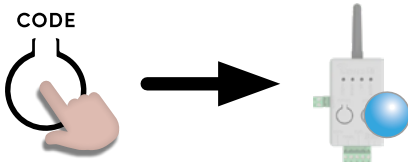
- **EXIT MODE:** Sends a single pulse trigger to receiver upon detection.
- **PRESENCE MODE:** Pulses & Latches relay holding gate open whilst the loop is still detecting vehicle.
- **PARKING MODE:** Same behaviour as Presence mode, slower latch & lower power use.

NOTE: DO NOT USE PRESENCE MODE AS A PERSONAL SAFETY FUNCTION, IT IS DESIGNED FOR OPERATION ONLY FOR USE WITH VEHICLES NOT PEDESTRIANS.

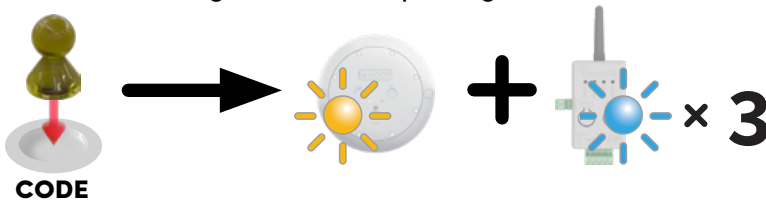
Step 1 - Coding to e-TRANS

Option 1 | Short Range Coding

1. Hold the CODE button on the e-TRANS until the Blue LED illuminates. Now release the CODE button.

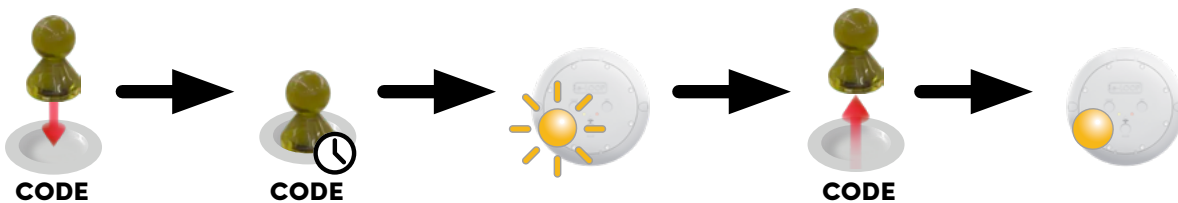


2. Hold the magnet in the CODE recess. e-LOOP Yellow LED will flash & e-TRANS Blue LED will flash 3 times. Indicating a successful pairing.



Option 2 | Long Range Coding

1. Hold the magnet in the CODE recess of the e-LOOP. The Yellow LED will flash once. Now remove the magnet. The Yellow LED will illuminate solid.

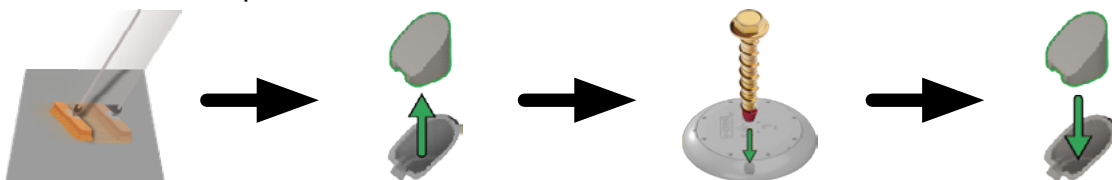


2. Go to the e-TRANS 50, hold the CODE Button until the e-TRANS Blue LED illuminates. Remove finger from CODE Button, Blue LED will flash 3 times. The e-LOOP Yellow LED will flash. Indicating a successful pairing. The LEDs will turn off returning to normal operations.



Step 2 - Mounting

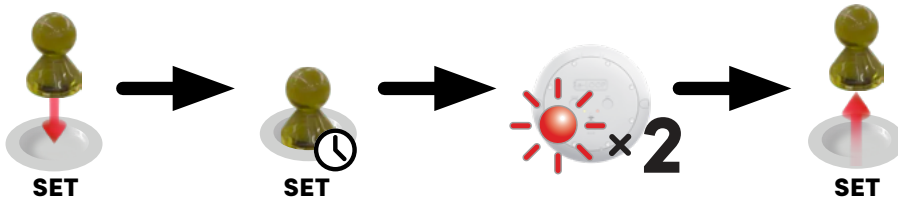
Clean desired mounting location of any dirt or debris. Remove the screw caps from the e-LOOP, secure the e-LOOP with the included fasteners. Ensure the e-LOOP is firmly secured & cannot be moved. Reinstall screw caps.



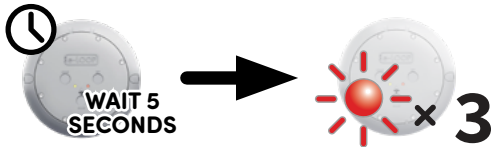
! ALWAYS FIT IN ACCORDANCE WITH FITMENT NOTES. FAILURE TO DO SO MAY VOID WARRANTY

Step 3 - Calibration

1. Remove any metallic objects from near the e-LOOP sensor.
2. Hold the magnet in the SET recess until the Red LED flashes 2 times. Now remove the magnet.



3. The e-LOOP will take about 5 seconds to calibrate, once complete the red LED will flash 3 times.



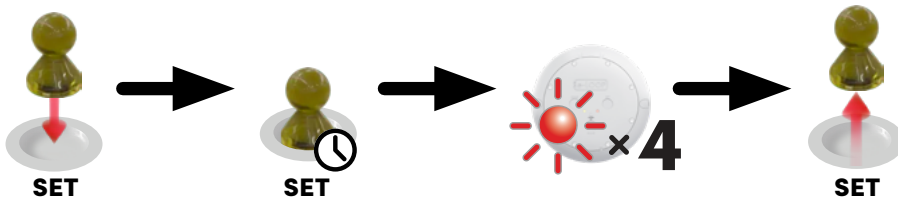
NOTE: After Calibration you may get an error indication.

ERROR 1: Low Radio Range - **Yellow** LED Flashes 3 Times

ERROR 2: No Radio Connection - Yellow & Red LED Flash 3 Times

Un-Calibration

Hold magnet in set recess on e-LOOP, until red LED flashes 4 times. e-LOOP is now un-calibrated.

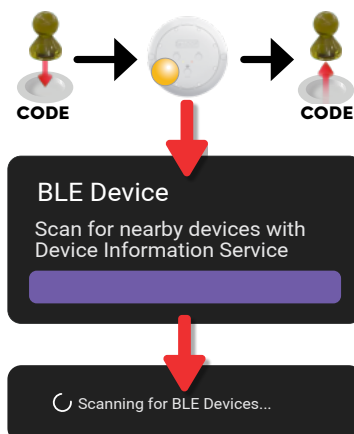


Connecting with e-CONNECT App

The e-CONNECT Mobile Application is available for both Android & iPhones. Download to access advanced settings & diagnostics.

Step 1.

- Open the e-CONNECT mobile application
- Allow all requested device permissions (bluetooth, wifi, etc)
- Tap the magnet on the CODE recess of your e-LOOP. Yellow LED will illuminate solid.
- Press "Scan for Devices"
- Allow the application a moment to scan for devices

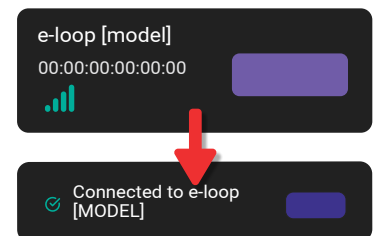


Step 2.

Once e-LOOP is located, details will be shown. Tap "Connect" on the corresponding e-LOOP tab.

Once a successful connection has been established you will be shown a summary of the unit.

You are now ready to make your desired changes.



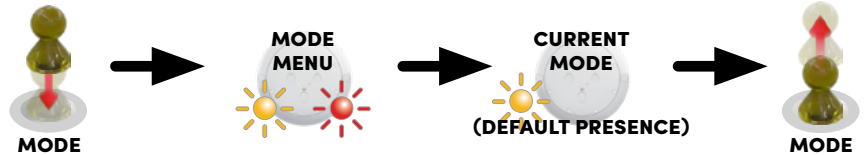
Changing Mode

The e-LOOP Light Industrial has 3 modes. Exit, Presence & Parking. These modes can be changed physically or via the e-CONNECT App.

- NOTE: DO NOT USE PRESENCE MODE AS A PERSONAL SAFETY FUNCTION, IT IS DESIGNED FOR OPERATION ONLY FOR USE WITH VEHICLES NOT PEDESTRIANS.**

Entering Menu

1. Hold Magnet in MODE recess on e-LOOP until both LEDs flash once; then LED will flash to indicate current mode.



Exit Mode

2. Hold Magnet in SET recess on e-LOOP, until the Red LED starts flashing; this indicates EXIT MODE.



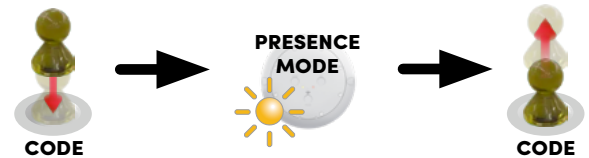
Parking Mode

3. Hold Magnet in MODE recess on e-LOOP, until the Yellow LED illuminates Solid; this indicates PARKING MODE.



Presence Mode

4. Hold Magnet in CODE recess on e-LOOP, until the Yellow LED starts flashing; this indicates PRESENCE MODE.



5 Sec

To enter the CONFIRMATION MODE MENU, wait 5 seconds after operational mode is confirmed via LED

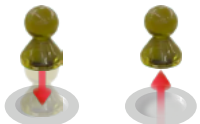
Confirmation Menu

1. Once in the Confirmation Menu, the Red LED will illuminate Solid. Indicating that Confirmation is NOT enabled.
2. To Enable Confirmation Mode, Tap magnet onto the CODE recess. Both the Yellow & Red LEDs will illuminate solid. Indicating Confirmation mode is enabled.



10 Sec

To EXIT MENU Wait 10 Seconds



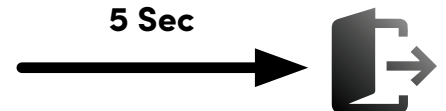
CODE



3. Once desired setting is selected, wait 5 seconds and the Confirmation Menu will be exited automatically. Both LEDs will flash 3 times to indicate this.



5 Sec



Changing Mode with e-CONNECT APP

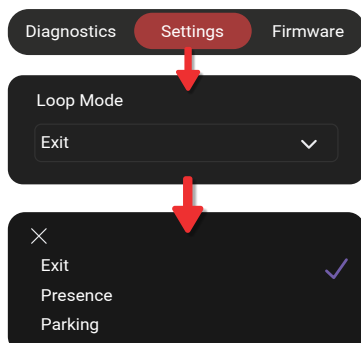
Step 1.

Scroll down to the Loop Settings menu.

Select the dropdown menu within the Loop Settings section.

Change to mode of choice: Exit, Presence (Default) or Parking.

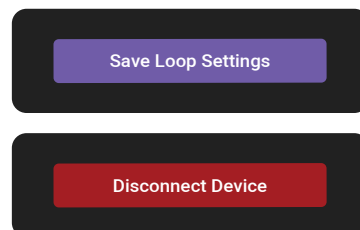
Once selected, press the X to close the dropdown menu.



Step 2.

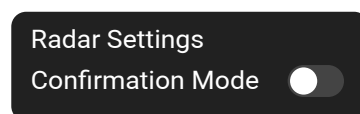
Once you have selected the operational mode of your choice, press "Save Loop Settings"

After successfully saving, press "Disconnect Device" to return loop to regular operation.



Confirmation Mode

To turn on Confirmation Mode, Scroll down to the Radar Settings menu. Tap the switch next to "Confirmation Mode" label to toggle On/Off. Once you have selected the confirmation mode of your choice, press "Save Loop Settings" & disconnect.



Resetting e-LOOP to Factory Defaults

To reset the e-LOOP to factory defaults, hold the Magnet on the CODE recess for 10 seconds until the Yellow LED flashes 3 times.

