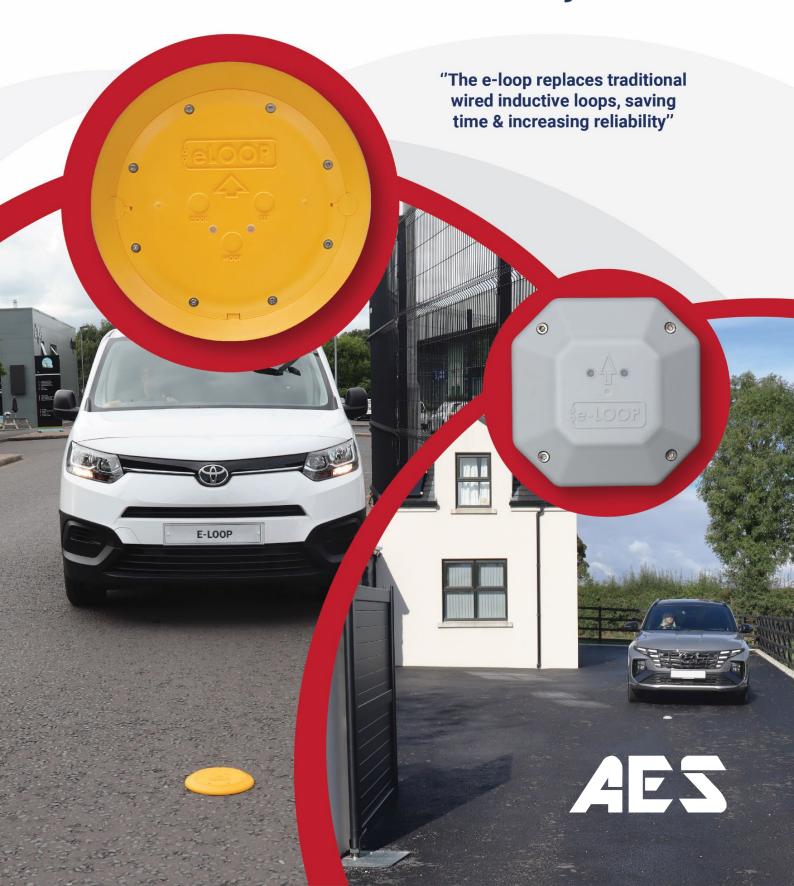


# **Wireless Vehicle Detection Systems**





The **e-Loop Mini** replaces traditional wired inductive loops, saving you time and money while increasing reliability.

The **e-Loop Mini** is the little brother of the commercial e-Loop, perfect for domestic applications.

## **FEATURES**

- Quick and easy installation.
- Small compact design (120mm x 120mm x 30mm high) (4.7" x 1.1").
- Static load capacity 2500kg (5500 lbs).
- Uses standard 1.5V AA Lithium batteries (included).
- Providing up to 3-4 years battery life.
- High security 128-bit encryption.
- Range up to 50 meters/yards.



## **EL00M-K**

E-loop mini Domestic loop kit EXIT MODE.

- 1 x e-Loop domestic Exit mode wireless detection module.
- 1 x single channel transceiver (Trans-50).
- 2 x Concrete fixing bolts.



## **ELOOM**

E-loop mini Domestic loop ONLY EXIT MODE.

1 x e-Loop domestic Exit mode wireless detection module.

# Domestic e-loop mini

Domestic Wireless Vehicle Detection System uses magnetometer sensors to detect the presence and movement of vehicles. These detections are transmitted to a nearby transceiver for gate activation. The sensors are installed on the surface of entry or exit passages using dynabolts, contain two replaceable AA batteries, and can withstand almost any vehicle.

**Note:** Gate or door controller must have a dedicated open input and auto close function enabled.

## **Functions / Features**

## Lower power consumption 3-axis magnetometer for vehicle detection

- 8 Hz sampling rate
- Auto-calibration
- Exit/Entry detection mode

## Fast and simple installation

Quick non-permanent installation

## Up to 4 year battery life

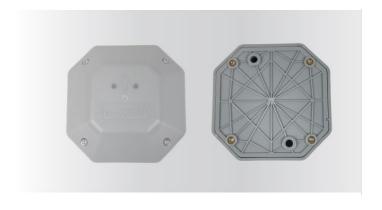
- Compact design
- Compatible with various gates

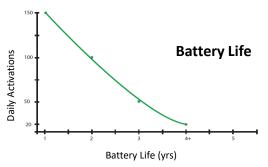
## Reliable radio communications with transceiver

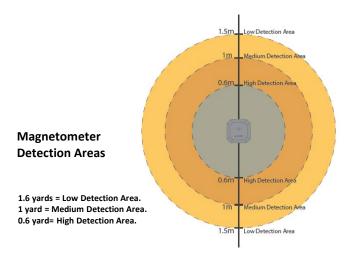
- Reliable radio communication
- High-security 128-Bit AES Encryption

## **Radio Specifications**

Frequency	433.39 MHz
Modulation	FSK
Bitrate	9.6 kbps
Bandwidth	250 kHz
Antenna Type	PCB
Nominal Output Power	10 dBm
Receive Sensitivity	-126.2 dBm
Security	128-Bit AES Encryption
Spurious Emissions	<ul> <li>30 - 1000 MHz: &lt; -56 dBm</li> <li>1 - 12.75 GHz: &lt; -44 dBm</li> <li>1.8 - 1.9 GHz: &lt; -56 dBm</li> <li>5.15 - 5.3 GHz: &lt; -51 dBm</li> </ul>







## Power, Physical and Environment

Power	4 * 3.6 V 2700ma
Dimensions	120*120*30mm (4.7" x 1.1")
Weight	500g (1.1 lbs)
Environment	<ul><li>designed for above ground mounting.</li><li>IP68 ingress Protection.</li></ul>
Operating Temp	-40° to 80° C (-40°F to 176°F)
Standby Power	14μΑ
Activation Power	50mA

### **Compliance**

Safety	Tested to CE Approval
ЕМС	FSKTested to: EN 301 489-1 V2.2. "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for Electro Magnetic 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





## Installation in 3 simple steps

- 1. Code in the e-Loop
- 2. Secure the e-Loop to the driveway
- 3. Calibrate the e-Loop... and you're ready to operate in less than 15 minutes.

Save many hours of installation time compared to wired loop systems.

#### **Available Models:**

PRESENCE MODE WITH ADDED RADAR PROTECTION.

OR

#### **EXIT MODE**

DISCLAIMER: UNITS WITH THE PRESENCE FEATURE IS NOT TO BE USED AS A SOLE SAFETY DEVICE & SHOULD BE USED IN CONJUNCTION WITH STANDARD GATE SAFETY PRACTICES.



# **Detection System**

## **FEATURES**

Quick and easy installation.

**Commercial Wireless Vehicle** 

- Compact profile only 28mm high x 220mm diameter (1.1" x 8.6").
- Not effected by ground movement.
- 10600 mA battery (included) giving up to 6-10 years battery life (depending on mode).
- High security 128 bit encryption.
- Range 50 metres/yards.
- Made of high-impact plastic (10 tonne static load limit).

### **Radio Specifications**

Frequency	433.39 MHz
Modulation	FSK
Bitrate	9.6 kbps
Bandwidth	250 kHz
Antenna Type	PCB
Nominal Output Power	10 dBm
Receive Sensitivity	-126.2 dBm
Security	128-Bit AES Encryption
Spurious Emissions	<ul> <li>30 - 1000 MHz: &lt; -56 dBm</li> <li>1 - 12.75 GHz: &lt; -44 dBm</li> <li>1.8 - 1.9 GHz: &lt; -56 dBm</li> <li>5.15 - 5.3 GHz: &lt; -51 dBm</li> </ul>

## **Power, Physical and Environment**

Power	4 * 3.6 V 2700ma
Dimensions	220*220*26mm (1.1" x 8.6").
Weight	1000g
Environment	<ul><li>designed for above ground mounting</li><li>IP68 ingress protection</li></ul>
Operating Temp	-40° to 80° C (-40°F to 176°F)
Standby Power	14μΑ
Activation Power	50mA

## Compliance

Safety	Tested to CE Approval
EMC	FSKTested to: EN 301 489-1 V2.2. "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard for Electro Magnetic 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

## **Commercial e-loop Presence Mode**

## **ELOOC-RAD**

The Commercial Wireless Vehicle Detection System uses magnetometer sensors to detect the presence of oncoming vehicles. These detections are transmitted to a nearby transceiver for gate activation. After the vehicle is detected, the e-loop will switch to radar mode. The sensors are installed on the surface of entry or exit passages using dynabolts, contain four replaceable Lithium batteries, and can withstand almost any vehicle.

Note: Gate or door controller must have a dedicated open input and auto close function enabled.

#### **Functions / Features**

## Lower power consumption 3-axis magnetometer for vehicle detection

- 8 Hz sampling rate
- Auto-calibration
- Exit/Entry detection mode

### Fast and simple installation

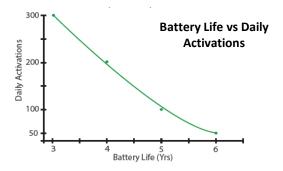
Quick non-permanent installation

### Up to 6 year battery life

- Compact design
- Compatible with various gates

#### Reliable radio communications with transceiver

- Reliable radio communication
- High security 128-Bit AES Encryption



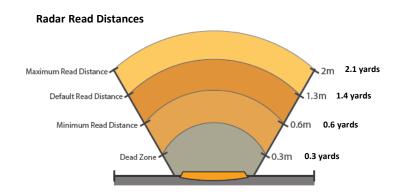
Note: Battery life is dependent on many factors, including daily activations, time used per activation, radar range and external conditions.

#### **Magnetometer Detection Areas**

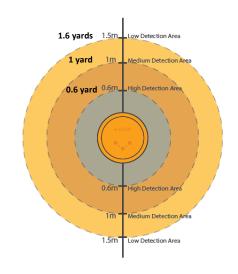
Varying magnetic field detection zones. The grey area depicts a 0.6m high sensitivity detection area surrounding the e-loop, suitable for the majority of vehicles. The dark colour area depicts a 1m medium sensitivity detection area surrounding the e-loop, suitable for most vehicles. The light colour depicts a 1.5m low sensitivity detection area surrounding the e-loop, which is only suitable for some vehicles.

The Radar sensors can detect vehicles that are stopped above the e-loop. The added radar utilises a two-way radio communication protocol for reliable operation. Once the magnetometer sensor detects an oncoming vehicle, the transceiver relay will be latched and confirmation will be sent back to the e-loop. If the magnetic field drops below the set threshold, the radar will check if a vehicle is present. If no vehicle is detected, an unlatch command is sent to the relay, and the transceiver will send a confirmation to the e-loop. If the confirmation is missed, multiple attempts will be made to ensure A safe operation. Radar settings can be adjusted using the e-diagnostics remote. Settings that can be changed include; Dead zone, sensor distance, sensitivity, magnetic field release level, and confirmation mode.

DISCLAIMER: UNITS WITH THE PRESENCE FEATURE IS NOT TO BE USED AS A SOLE SAFETY DEVICE & SHOULD BE USED IN CONJUNCTION WITH STANDARD GATE SAFETY PRACTICES.



Radar detection range. Spanning from a 60° FOV from the e-loop, these are the range zones. The Gray area depicts the dead zone, in which objects cannot be detected. The Minimum read distance is 0.6m. The default read distance is 1.3m, and the Maximum read distance spans up to 2m.



## **Commercial e-loop EXIT Mode**

## **ELOOC**

The Commercial Wireless Vehicle Detection System uses magnetometer sensors to detect the presence of oncoming vehicles. These detections are transmitted to a nearby transceiver for gate activation. After the vehicle is detected, the eloop will switch to radar mode. The sensors are installed on the surface of entry or exit passages using dynabolts, contain four replaceable Lithium batteries, and can withstand almost any vehicle.



Note: Gate or door controller must have a dedicated open input and auto close function enabled.

## **Functions / Features**

## Lower power consumption 3-axis magnetometer for vehicle detection

- 8 Hz sampling rate
- Auto-calibration
- Exit/Entry detection mode

## Fast and simple installation

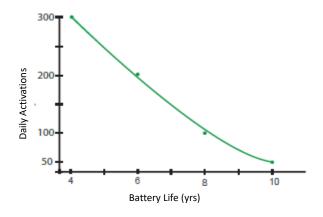
Quick non-permanent installation

## Up to 10 year battery life

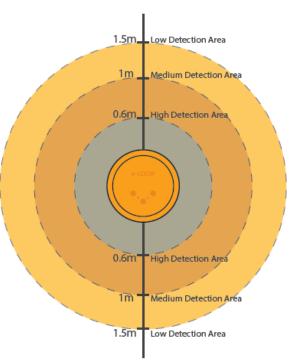
- Compact design
- Compatible with various gates

### Reliable radio communications with transceiver

- Reliable radio communication
- High security 128-Bit AES Encryption



## **Magnetometer Detection Areas**



1.6 yards = Low Detection Area.1 yard = Medium Detection Area.0.6 yard= High Detection Area.

## **Battery Life vs Daily Activations**

Note: Battery life is dependent on many factors, including daily activations, time used per activation, radar range and external conditions.

### **KITS & PRODUCT CODES**

## **PRESENCE MODE** WITH ADDED RADAR PROTECTION.

- Dual sensor technology.
- · Magnetic field and Radar detection.



## e-Loop Commercial Radar **Loop kit** PRESENCE MODE.

- 1 x e-Loop commercial Presence mode wireless detection module.
- 1 x single channel transceiver (Trans-50).
- 2 x Concrete fixing bolts.
- 1x Magnet.

**EL00C-RAD-K** 



**EXIT MODE** 

Magnetic field detection.

# e-Loop Commercial **loop kit** EXIT MODE.

- 1 x e-Loop commercial Exit mode wireless detection module.
- 1 x single channel transceiver (Trans-50).
- · 2 x Concrete fixing bolts.
- 1x Magnet.

**EL00C-K** 



e-Loop Commercial Radar <u>Loop only</u> PRESENCE MODE.

1 x e-Loop commercial Presence mode wireless detection module.

**EL00C-RAD** 



## e-Loop commercial **loop only** EXIT MODE.

1 x e-Loop commercial exit mode wireless detection module.

**ELOOC** 



e-Loop Commercial Radar **Loop kit** PRESENCE MODE with LCD Transceiver.

- 1 x e-Loop Presence mode wireless detection module.
- 1 x LCD transceiver (Trans-200).
- 2 x Concrete fixing bolts.
- 1x Magnet.

**EL00C-RAD-KLT** 



## e-Loop Commercial <u>loop</u> <u>kit</u> EXIT MODE with LCD Transceiver.

- 1 x e-Loop exit mode wireless detection module.
- 1 x LCD transceiver (Trans-200).
- 2 x Concrete fixing bolts.
- 1x Magnet.

**EL00C-KLT** 





## Installation in 3 simple steps

- 1. Code in the e-Loop.
- 2. Core bore 89mm hole 70mm deep and secure using flexible mastic (3.5" hole 2.5" 2.7" deep).
- 3. Calibrate the e-Loop... and you're ready to operate in less than 30 minutes.

## Save many hours of installation time compared to wired loop systems.

### **Available Models:**

PRESENCE MODE WITH ADDED RADAR PROTECTION.

OR

#### **EXIT MODE**

DISCLAIMER: UNITS WITH THE PRESENCE FEATURE IS NOT TO BE USED AS A SOLE SAFETY DEVICE & SHOULD BE USED IN CONJUNCTION WITH STANDARD GATE SAFETY PRACTICES.

## **Commercial Inground**

## **FEATURES**

- Dual sensing technology. (EL00IG-RAD only).
- High security 128 bit encryption.
- · Quick and easy installation.
- Recesses into the driveway 55mm inground height x 89mm diameter (2.1" x 3.5").
- Not affected by ground movement.
- 14500 mA battery (included) giving up to 6-10 years battery life (depending on mode).
- Top access for changing battery.
- Up to 50 metres range.

DISCLAIMER: UNITS WITH THE PRESENCE FEATURE IS NOT TO BE USED AS A SOLE SAFETY DEVICE & SHOULD BE USED IN CONJUNCTION WITH STANDARD GATE SAFETY PRACTICES.

### **Radio Specifications**

Frequency	433.39 MHz
Modulation	FSK
Bitrate	9.6 kbps
Bandwidth	250 kHz
Antenna Type	PCB
Nominal Output Power	10 dBm
Receive Sensitivity	-126.2 dBm
Security	128-Bit AES Encryption
Spurious Emissions	<ul> <li>30 - 1000 MHz: &lt; -56 dBm</li> <li>1 - 12.75 GHz: &lt; -44 dBm</li> <li>1.8 - 1.9 GHz: &lt; -56 dBm</li> <li>5.15 - 5.3 GHz: &lt; -51 dBm</li> </ul>

## **Power, Physical and Environment**

Power	1 * 3.6 V 14500ma
Dimensions	88*88*55mm
Weight	300g
Environment	<ul><li>designed for inground (flush) mounting</li><li>IP68 ingress Protection</li></ul>
Operating Temp	-40° to 80° C (-40°F to 176°F)
Standby Power	14μΑ
Activation Power	50mA

### **Compliance**

Safety	Tested to CE Approval
ЕМС	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 Electro Magnetic 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

## Inground e-loop Presence Mode

## **EL00IG-RAD**

The Inground Wireless Vehicle Detection System uses magnetometer sensors to detect the presence and movement of vehicles. These detections are transmitted to a nearby transceiver for gate activation. The sensors are installed in the ground of entry or exit passages using sikaflex, contain a replaceable Lithium battery, and can withstand almost any vehicle. Gate or door controller must have a dedicated open input and autoclose function enabled.

### **Functions / Features**

## Lower power consumption 3-axis magnetometer for vehicle detection

- 8 Hz sampling rate
- Auto-calibration
- Exit/Entry detection mode

### Fast and simple installation

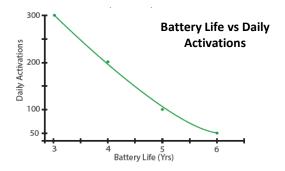
Quick non-permanent installation

## Up to 6 year battery life

- Compact design
- Compatible with various gates

#### Reliable radio communications with transceiver

- Reliable radio communication
- High security 128-Bit AES Encryption



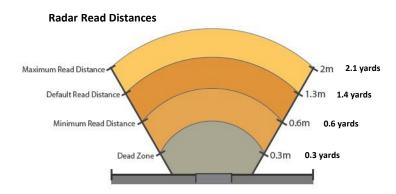
Note: Battery life is dependent on many factors, including daily activations, time used per activation, radar range and external conditions.

#### **Magnetometer Detection Areas**

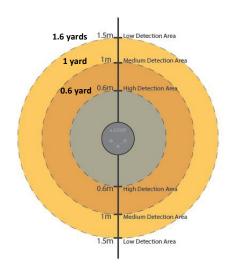
Varying magnetic field detection zones. The grey area depicts a 0.6m high sensitivity detection area surrounding the e-loop, suitable for the majority of vehicles. The dark colour area depicts a 1m medium sensitivity detection area surrounding the e-loop, suitable for most vehicles. The light colour depicts a 1.5m low sensitivity detection area surrounding the e-loop, which is only suitable for some vehicles.

The Radar sensors can detect vehicles that are stopped above the e-loop. The added radar utilises two-way radio communication protocol for reliable operation. Once the magnetometer sensor detects an oncoming vehicle, the transceiver relay will be latched and confirmation will be sent back to the e-loop. If the magnetic field drops below the set threshold, the radar will check if a vehicle is present. If no vehicle is detected, an unlatch command is sent to the relay, and the transceiver will send a confirmation to the e-loop. If the confirmation is missed, multiple attempts will be made to ensure safe operation. Radar settings can be adjusted using the e-diagnostics remote. Settings that can be changed include; Dead zone, sensor distance, sensitivity, magnetic field release level, and confirmation mode.

DISCLAIMER: UNITS WITH THE PRESENCE FEATURE IS NOT TO BE USED AS A SOLE SAFETY DEVICE & SHOULD BE USED IN CONJUNCTION WITH STANDARD GATE SAFETY PRACTICES.



Radar detection range. Spanning from a 60° FOV from the e-loop, these are the range zones. The Gray area depicts the dead zone, in which objects cannot be detected. The Minimum read distance is 0.6m. The default read distance is 1.3m, and the Maximum read distance spans up to 2m.



## **Inground e-loop EXIT Mode**

## **ELOOIG**

The Inground Wireless Vehicle Detection System uses magnetometer sensors to detect the presence and movement of vehicles. These detections are transmitted to a nearby transceiver for gate activation. The sensors are installed in the ground of entry or exit passages using sikaflex, contain a replaceable Lithium battery, and can withstand almost any vehicle. Gate or door controller must have a dedicated open input and auto close function enabled.

Note: Gate or door controller must have a dedicated open input and auto close function enabled.

## **Functions / Features**

## Lower power consumption 3-axis magnetometer for vehicle detection

- 8 Hz sampling rate
- Auto-calibration
- Exit/Entry detection mode

## Fast and simple installation

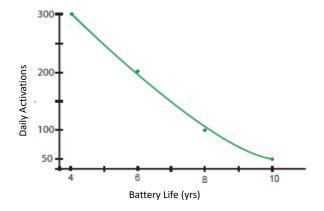
Quick non-permanent installation

### Up to 10 year battery life

- Compact design
- Compatible with various gates

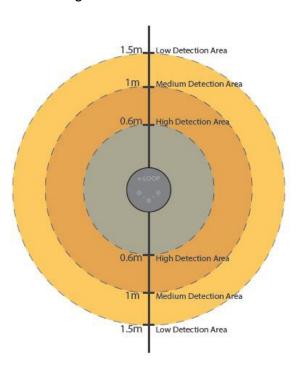
### Reliable radio communications with transceiver

- Reliable radio communication
- High security 128-Bit AES Encryption





### **Magnetometer Detection Areas**



1.6 yards = Low Detection Area.1 yard = Medium Detection Area.0.6 yard= High Detection Area.

## **Battery Life vs Daily Activations**

Note: Battery life is dependent on many factors, including daily activations, time used per activation, radar range and external conditions.

### **KITS & PRODUCT CODES**

## **PRESENCE MODE** WITH ADDED RADAR PROTECTION.

- Dual sensor technology.
- Magnetic field and Radar detection.



e-Loop inground commercial **Radar loop** PRESENCE MODE.

- 1 x e-Loop inground Presence mode wireless detection module.
- 1 x single channel transceiver (Trans-50).
- 1x Magnet.

**EL00IG-RAD-K** 



· Magnetic field detection.



e-Loop inground commercial <u>loop kit</u> EXIT MODE.

- 1 x e-Loop commercial inground Exit mode wireless detection module.
- 1 x single channel transceiver (Trans-50).
- 1x Magnet.

**EL00IG-K** 



e-Loop inground commercial **loop only** EXIT MODE.

1 x e-Loop commercial inground Exit mode wireless detection module.

**ELOOIG** 



e-Loop inground commercial <u>Radar</u> <u>loop only</u> PRESENCE MODE.

1 x e-Loop commercial inground Presence mode wireless detection module.

**EL00IG-RAD** 



e-Loop inground commercial **Radar loop** PRESENCE MODE with LCD Transceiver.

- 1 x e-Loop inground presence mode wireless detection module.
- 1 x LCD transceiver (Trans-200).
- 1x Magnet.

**EL00IG-RAD-KLT** 



e-Loop inground commercial <u>loop kit</u> EXIT MODE with LCD Transceiver.

- 1 x e-Loop inground Exit mode wireless detection module.
- 1 x LCD transceiver (Trans-200).
- 1x Magnet.

**EL00IG-KLT** 





Introducing the e-Diagnostic bidirectional remote – the ideal tool for the e-Loop range (works with e-loop commercial range & mini).

## Easy to use

Simply place the remote on top of the e-Loop, press connect, and you are ready to go. With easy-to-navigate menu functions you can:

- 1. Alter the trip level
- 2. Adjust the sensitivity of each Axis
- 3. Calibrate the e-Loop
- 4. Change operational mode
- 5. Monitor operation in real time
- 6. Check for background radio interference



Code: EDR00

- Graphic LCD display.
- Strong and durable IP67 rated casing.
- Powered by 2 x AAA batteries.



**Code: E-REMOTE** 



## Two-way remote control

- · Bidirectional remote control.
- 3 channels plus lock and unlock button.
- Allows you to latch and unlatch relays on the e-Trans 200 using the lock and unlock keys.
- Confirmation of command sent back to remote with lock and unlock LED indication.
- Functions on all e-Gate controllers allowing you to lock out entry or exit devices such as e-Keypad, e-Loop, e-Entry and the auto-close function.
- IP66 robust housing with silicone rubber surround.
- Powered by a single 3V CR2032 coin cell button battery.
- Frequency: 433MHz.









## **Code: E-KEYPAD**

**NOTE:** e-keypad will come in unlocked mode and it must be in this mode to code into Transceiver.

## SIMPLE AND SECURE

### **FEATURES**

- 433.39 MHz Transceiver.
- · Waterproof housing.
- Operates from a single coin cell 2450 lithium battery.
- Can be unlocked and used as an Entry button.
- Simple 4 to 8 pin code operation.
- Compatible with any Microtech Transceiver or gate controller.

The keypad can be used as a simple entry button or by locking the system the code is required to access the gate.



## **WIRELESS ACCESS**

**KEY FOB REMOTE CONTROL** 





Introducing a bidirectional wireless access control system for gate and door applications.

Code: ETRANS50

## SINGLE CHANNEL TRANSCEIVER

Featuring a compact design with an exceptional range, the e-Trans-50 is designed to manage access control for home and commercial systems.

- Compact design with exceptional range.
- SMA connector for standard for optional long-range antenna connection.
- Wide Voltage Range: 10-36V DC.
- Exceptionally low Current draw: standby 4.5 m/a, active 30 m/a.
- Frequency: 433.39 MHz.
- Remote storage: 50 remotes, 4 x e-Loops, 4 x Keypads, 4 x Entry Buttons.
- Relay: 1-amp contact rating, COM and N/O connections x 1 relay.
- Multiple Modes: Pulse, Latch and Hold.

With a unique lock-out function, this high-end accessory is designed to manage access control for commercial multi-unit complexes with up to 200 units, with functions also suitable for home systems.



- Simple to use menu functions with LCD display.
- High sensitivity 433 MHz -126 dBm receiver with 20 dBm Transmission output.
- External SMA connector to allow for the connection of different antennas.
- Wide input voltage range from 10V to 36V ACDC.
- 2 relay outputs with the ability to set to Pulse, Hold or Latch mode.
- Selectable ultra-low standby power consumption of only 4.5 m/a making it ideal for solar applications.
- 200 code storage with remote ID selection making it ideal for unit applications.
- · Ability to delete individual remote devices.
- Unique lock-out feature allowing you to lock out entry buttons, e-Loops and keypads using the lock and unlock function on the e-Remote.
- Ability to connect to the e-Loop to access menus and change settings.
- Test mode which allows you to test relay outputs, radio signal strength and radio interference.







## **Wireless Vehicle Detection Systems**

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