

LPR Installation Guide **V1.1**



1. Introduction

The PAL LPR (License Plate Recognition) Camera is designed for high-accuracy vehicle identification in parking management, access control, and traffic monitoring applications. This guide provides full instructions for installation, configuration, wiring, alignment and maintenance.

For optimal performance, please follow this installation guide carefully.

This document covers:

- Electrical and network requirements
- Mechanical installation
- Mounting recommendations
- Cable connections
- Initial network setup
- Alignment and testing
- Troubleshooting

2. Safety Instructions

⚠ Read this section before installing the device.

- power supply :Use one of the following options
 - 12 VDC $\pm 20\%$ / 2A power supply
 - PoE (802.3af)

Incorrect power input may **permanently damage the device**.

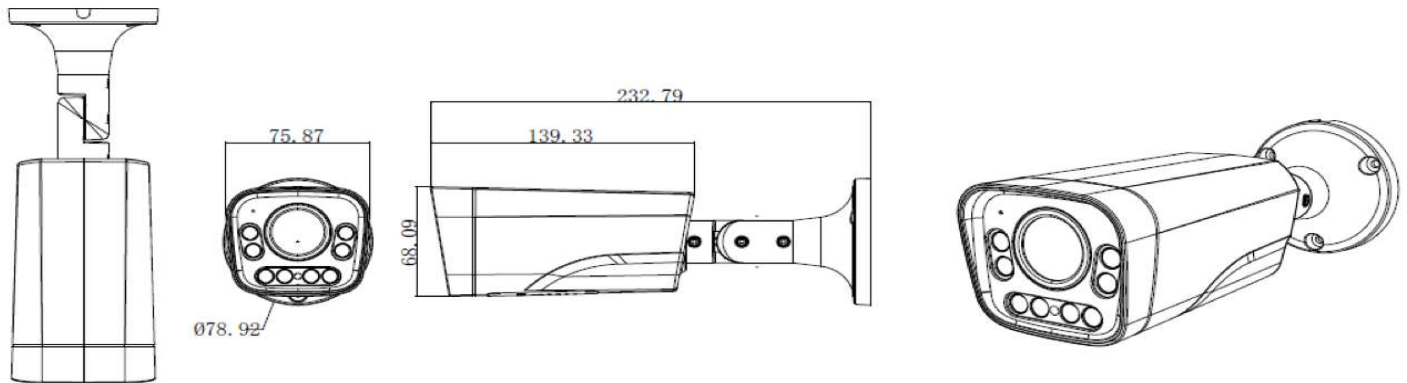
- Do not expose the camera to extreme light sources (sun glare, headlights).
- Install only on solid surfaces capable of supporting the camera's weight.
- Keep all cables away from sharp edges, vibration areas, and moving parts.
- Ensure proper waterproofing when installed outdoors.
- Follow local electrical guidelines and regulations.

Any physical modification, including cutting cables, voids the warranty !

3. Specifications

Category	Specification
Power Supply	12 VDC \pm 20% / 2A OR PoE (802.3)
Network	10/100 Mbps Ethernet (RJ45 cable) or 4G LTE CAT 4 (700 – 2600MHz)
I/O	1 * Relay output , 2 * Alarm inputs
Operating temperatures	-30°C to + 60°C
Ingress Protection	IP67
Mount Type	Wall/ pole mount
Camera Type	LPR (License Plate Recognition)

4. Dimensions (mm)



5. Package Contents

- PAL LPR Camera
- Screw and anchor kit
- Waterproof RJ45 connector
- User documentation
- Two Cellular antennas

Optional:

- Pole *
- Mounting base bracket*
- Enclosure*

*Bought seperately

- PAL LPR Camera



- Screw and anchor kit



- Waterproof RJ45 connector



- Two Cellular antennas



- Pole



- Mounting base bracket



- Enclosure



- Pole with Enclosure



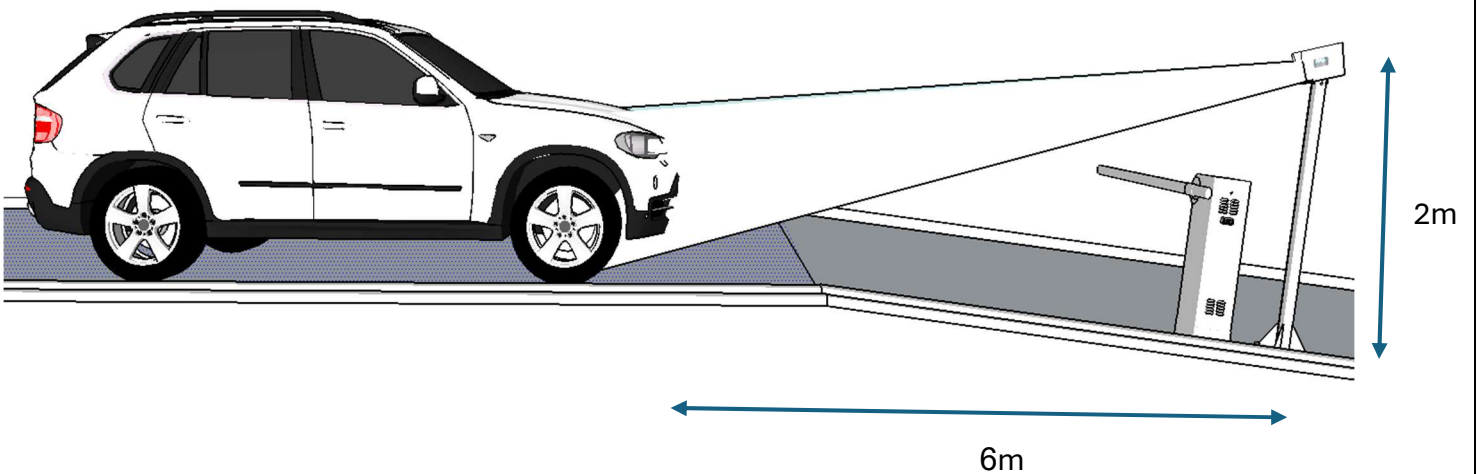
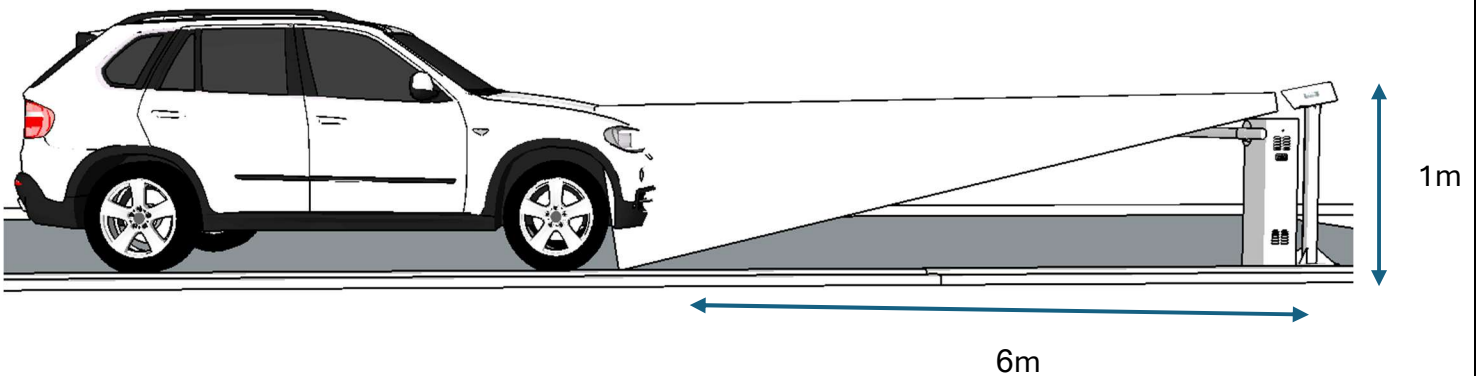
6. Installation Requirements

6.1 Recommended Mounting Height

1m – 2 m

6.2 Recommended Distance to Target Vehicle

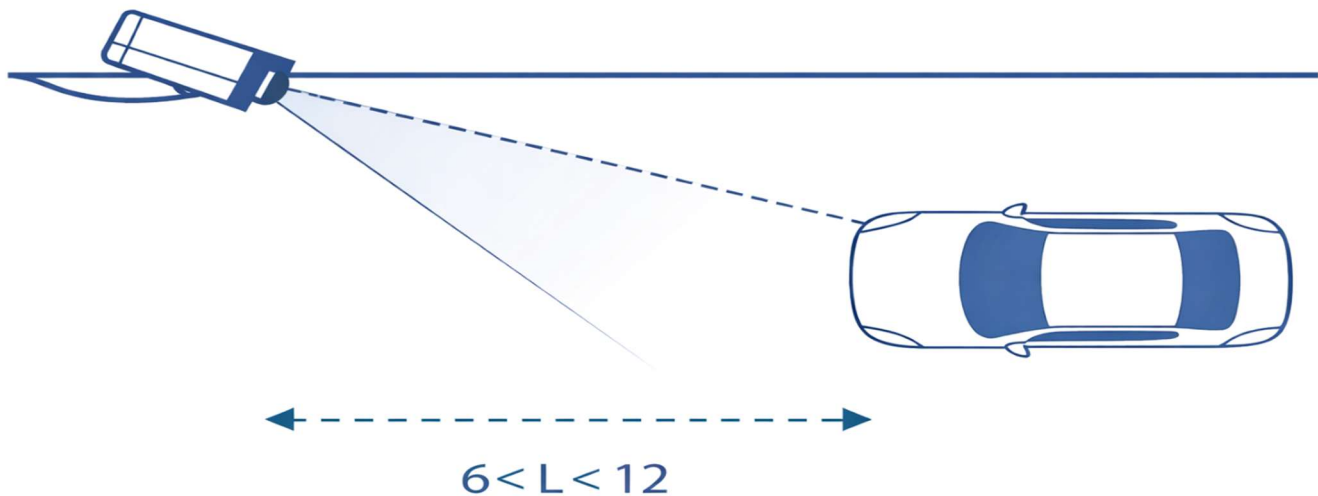
3 m – 12 m



Side View – Camera to Vehicle



Top View – Camera to Vehicle




7. Mounting the Camera

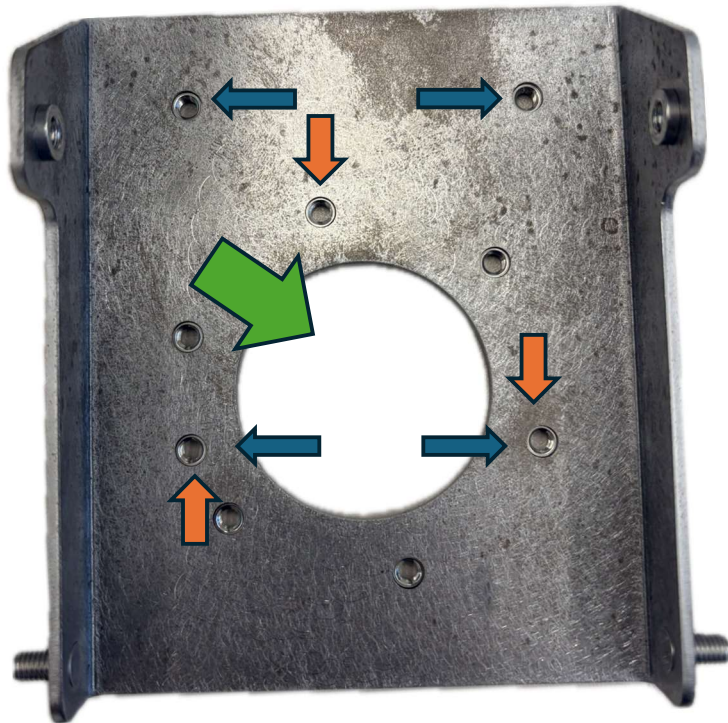
7.1 Bracket Assembly



Two types of camera mounting base

- Round mounting base with 3 screws
- Square mounting base with 4 screws

Mounting base installation instruction:

1. Route the camera's cable **through the large center hole** of the bracket (Green arrow). 
2. Align the camera's mounting base with the screw holes on the bracket (Blue / orange arrow).




- Blue Arrow are for square Base 4 screws. 
- Orange Arrow are for round Base 3 screws. 

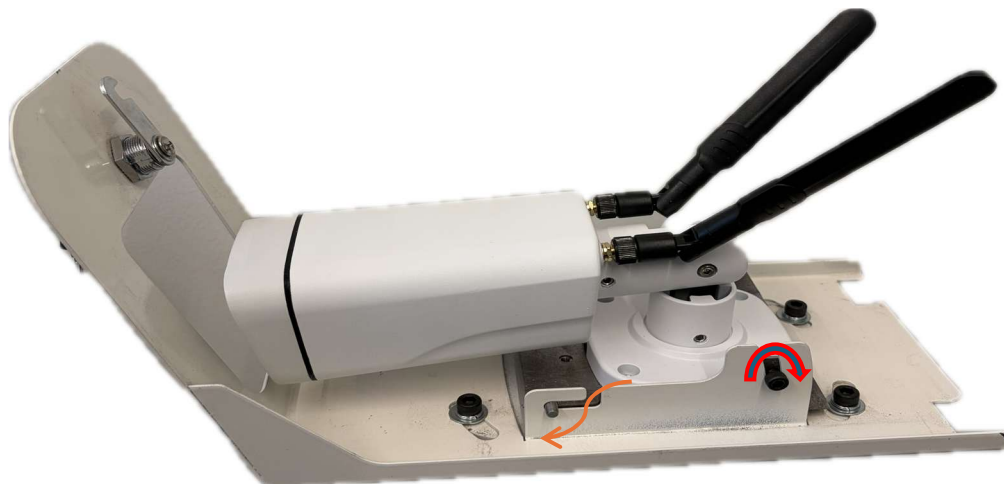
7.2 Pole Assembly:

On the sides of the bracket, you have **two bolts sticking out** (one on each side). These bolts are designed to hold the **camera arm / camera base plate**.

1. Align the **keyhole slots** on the arm with the two side bolts on the bracket




2. Slide the camera connected to the bracket down so it “locks” onto the two bolts see curved arrow.
3. Tighten the nuts onto the bolts to secure the arm firmly. 

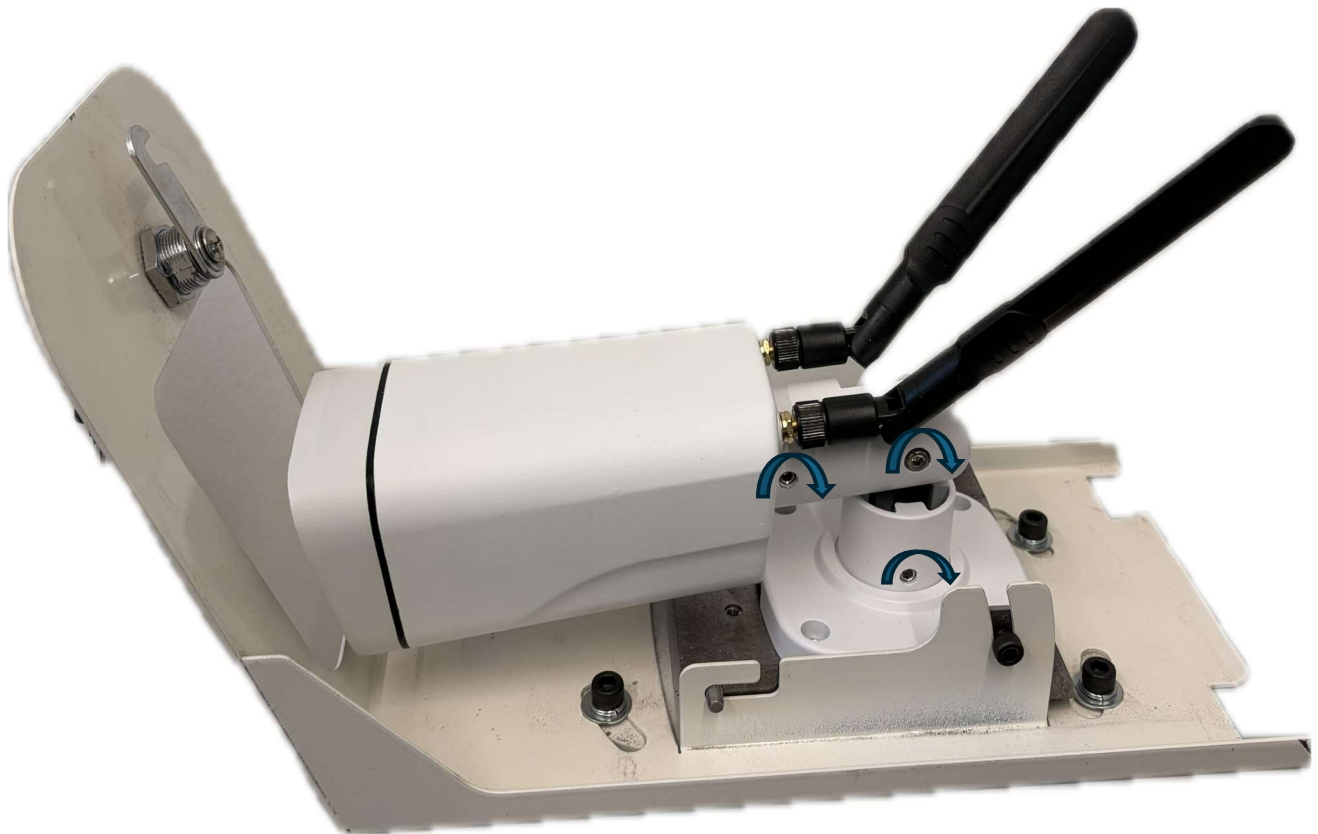


This gives the camera arm the ability to tilt and be adjusted before tightening.

Important Tip!

Before tightening everything fully:

- Aim the camera
- Adjust vertical and horizontal angle
- Then tighten the bolts 



Final Assembly Bracket with the Pole



IMPORTANT!

To properly close the enclosure, the antennas must be position **one click upwars**.
Faliure to position the antennas correctly **may cause damage to the antennas**.

8. Cable Connections

8.1 Power Options

When connecting the camera to power the red LED around the lens should **turn on lightly** and turn off after 10 seconds.

- **12 VDC** Connected Via DC jack



OR

- **PoE (802.3af)** via RJ45 (Ethernet)



8.2 Ethernet Connection

- Use Cat5e/6 cable
- Install the waterproof RJ45 connector

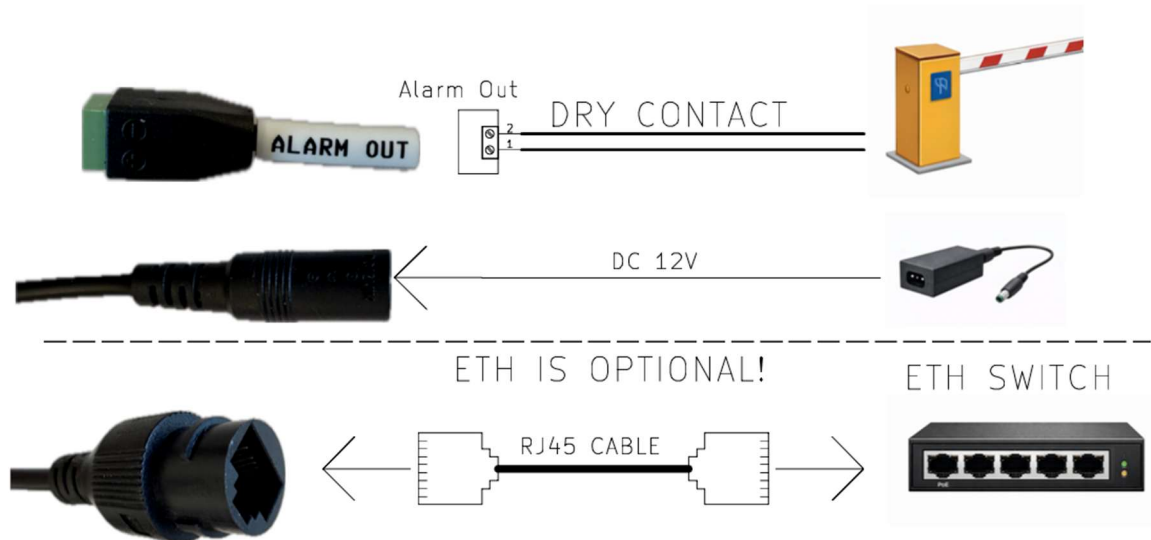
8.3 Gate/ Barrier control “Alarm out”

- Dry contact relay output
- Normally Open (NO) and COM

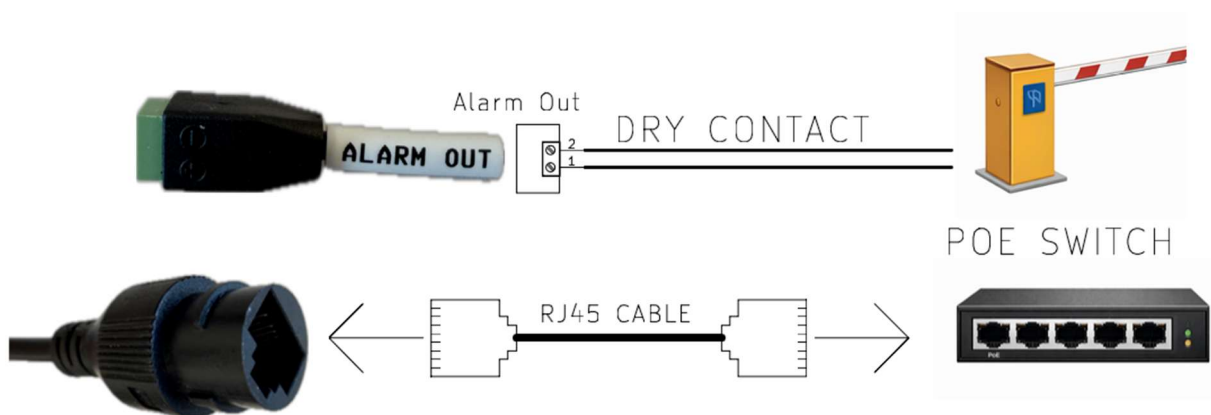


8.4 Connection scheme

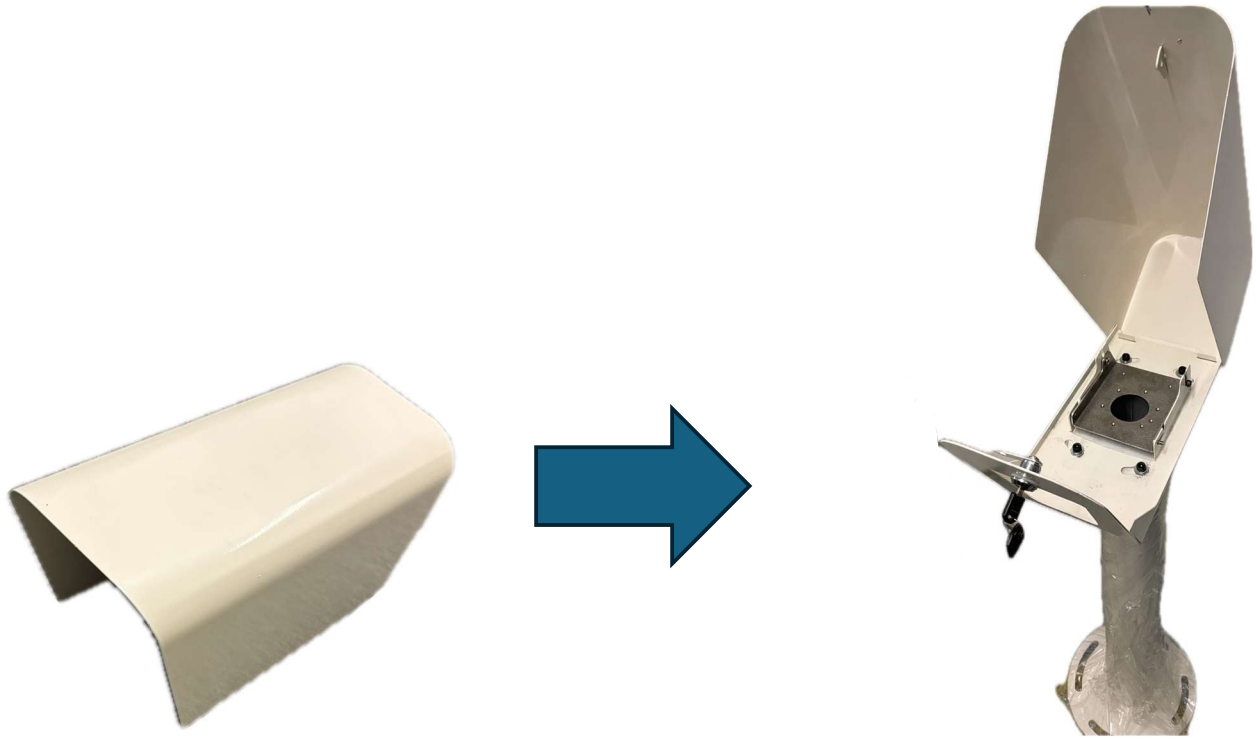
- Option 1:
 - Alarm Out – To briar (Open briar)
 - Power IN – 12VDC from Power supply
 - Network (optional) – External Ethernet network (Via RJ45 connector)



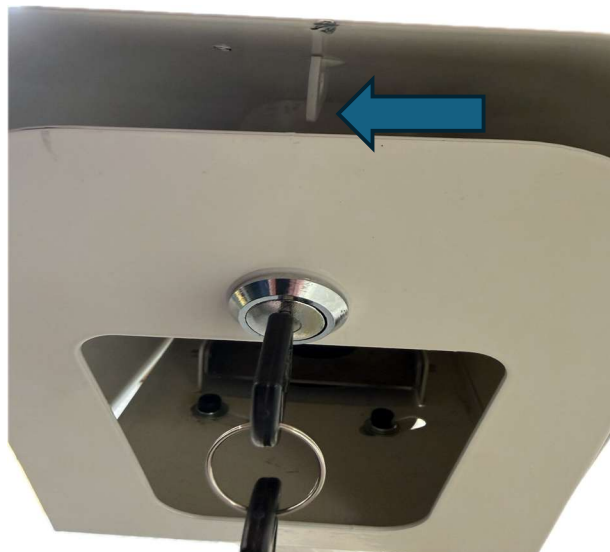
- Option 2:
 - Alarm Out – To briar (Open briar)
 - Power IN – PoE (Via RJ45 connector)
 - Network (optional) – External Ethernet network (Via RJ45 connector)



9. Enclosure closing



After placing the enclosure on the mount, ensure no cables are sticking out of the frame before closing it



After closing the enclosure lock it and make sure the lock is locked in the hole (Blue arrow)

10. Performance Checklist

Item	Status
Power supply connected	
“ Connected ” in PAL Portal	
Distance appropriate	
Day & night plate clarity verified	
Pal Portal receiving events	

11. Troubleshooting

Camera not powering on

- Try to change the power supply
- Try to connect the camera to POE power supply.

No network connection

- Check Sim card placed correctly.
- Verify RJ45 connector.


Plate not detected

- Adjust Zoom and Focus via PAL portal .
- Adjust horizontal angle.
- Adjust vertical angle.
- Adjust installation height.
- Clean camera lens.

For technical support, contact:

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