eSSL®

Security at Fingertips

eSSL Hydraulic Bollards HB426

⚠ Bollard is not for Pedestrians

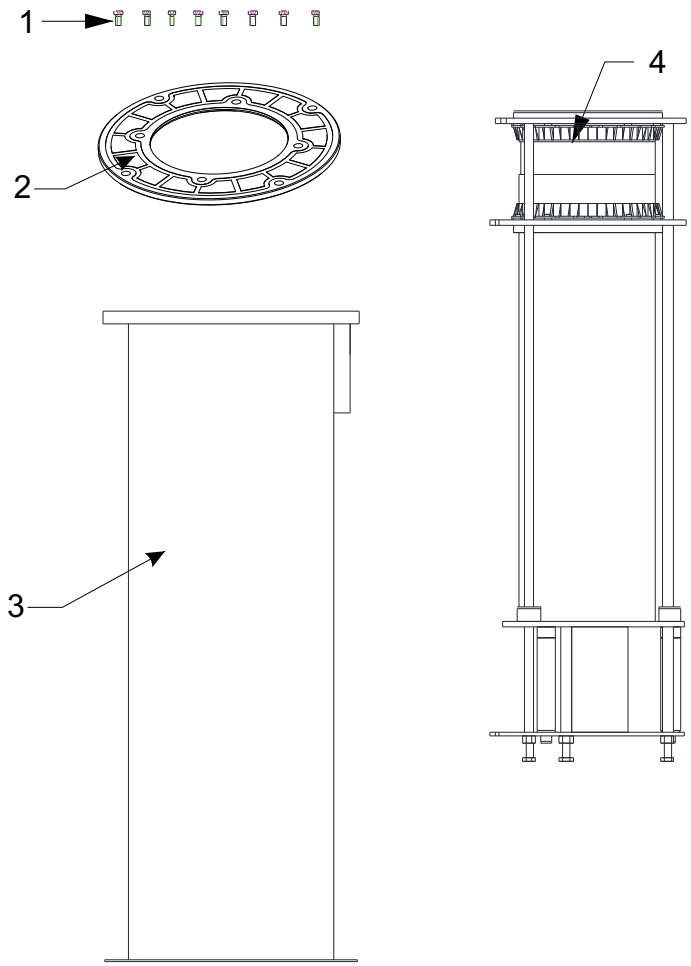
Automatic Bollards are designed for security. They are powerful and can cause serious bodily injury or death. Accordingly, direct all pedestrian traffic to a separate walk-through gate.

1. Before starting installation and operation or maintenance, cut off power supply.
2. The product must be earthed, And an Earth Leakage Breaker is necessary on the power supply.
3. Do not change the original inside wiring.
4. If power failure please cut off the power supply first, then operate the bollard by manual handle.
5. Keep the remote controller out of the reach of children. The control system must be installed at a minimum height of 1.5m from the ground.
6. Operate only where you can see the bollard clearly
7. When the bollard is being operated, any people or vehicle is forbidden to pass.
8. Do not permit children to play on or around the bollard.
9. Operation in violation of relevant safety regulations or not mentioned in this Manual is not allowed.
10. Please keep this manual for maintenance reference.

⚠ **Bollards are not for Pedestrians!**

Auto-bollards are designed for vehicular traffic. They are powerful accordingly, direct all pedestrian traffic to a separate walk-through gate.

1. Structure



① Screw

② Lid of foundation case

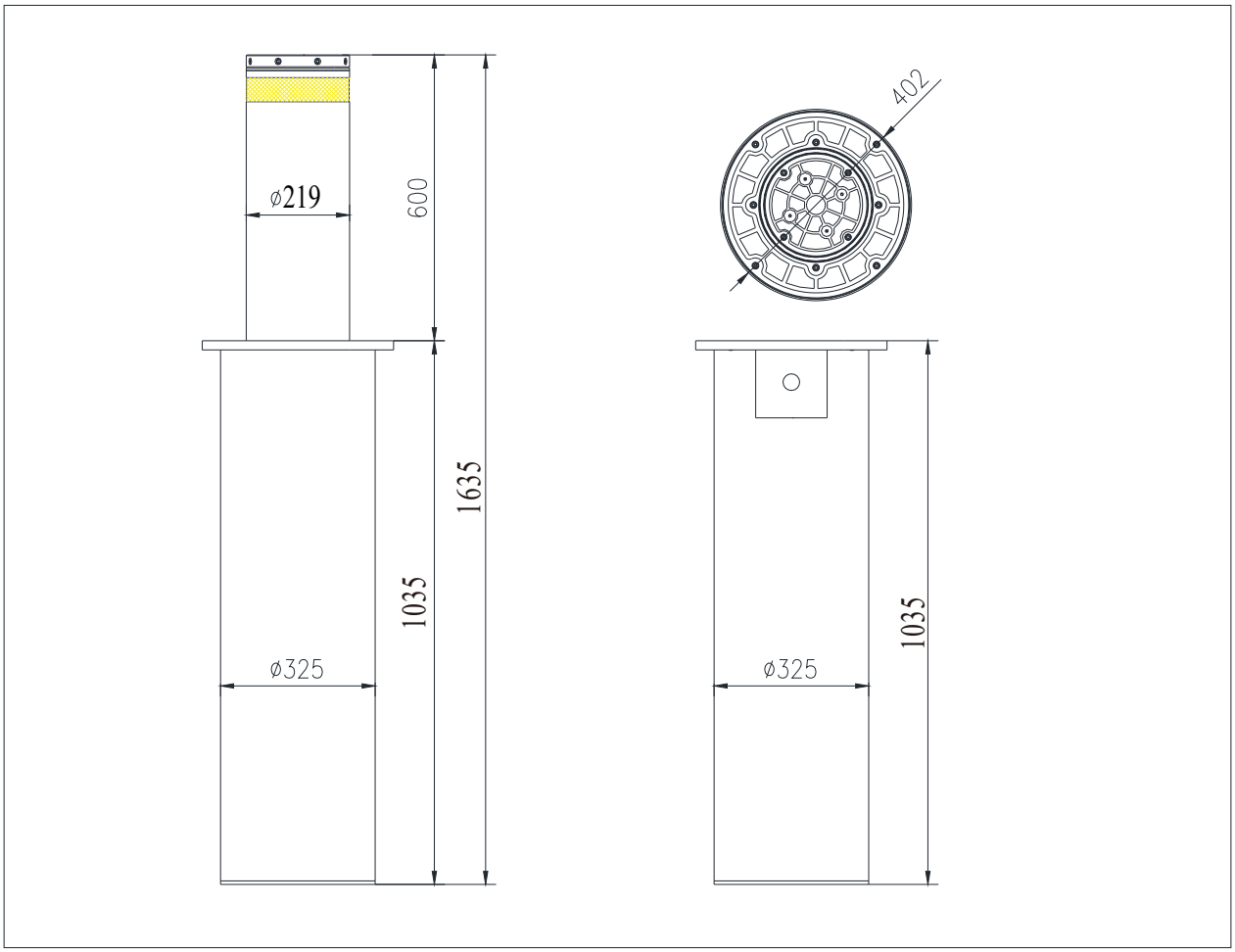
③ Foundation case

④ Cylinder

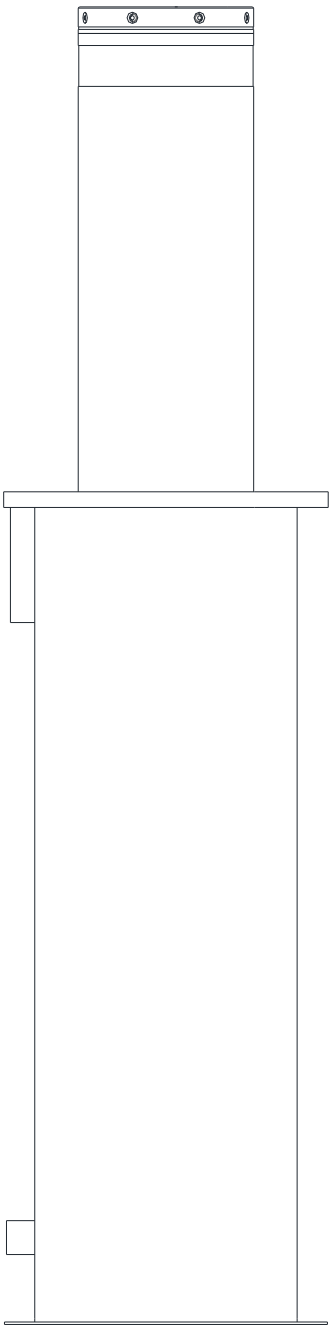
2. Technical data

Motor voltage	220V+/-10%
Drive	Hydraulic and electric motor integrated
Input power	1200W
Warning device	LED light + Reflective tape
Up/down time	4S
Lift height	600mm
Control function	Control unit
Working environment	-30° ~55°

3. Dimensions(unit: mm)



4. Packing Kit

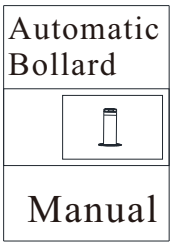


Bollard 1 pcs

Lifting eye bolt 2pcs

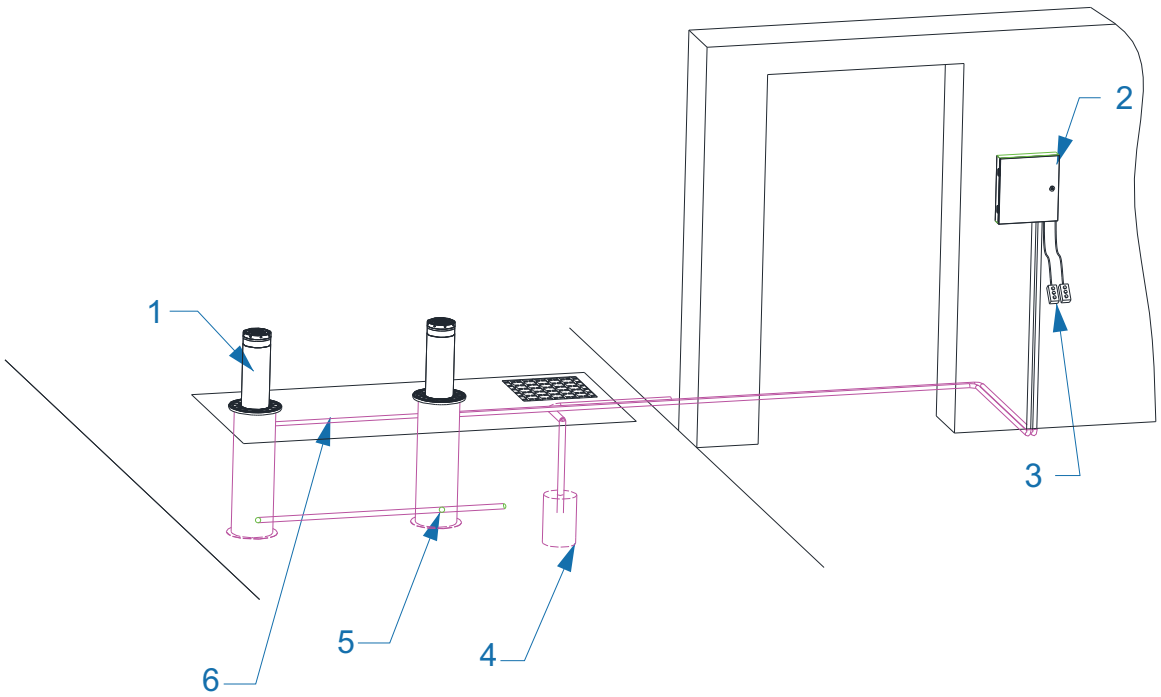
Inner Hexagonal screw(backup) 4pcs

Inner Hexagon wrench 1pcs



Manual 1pcs

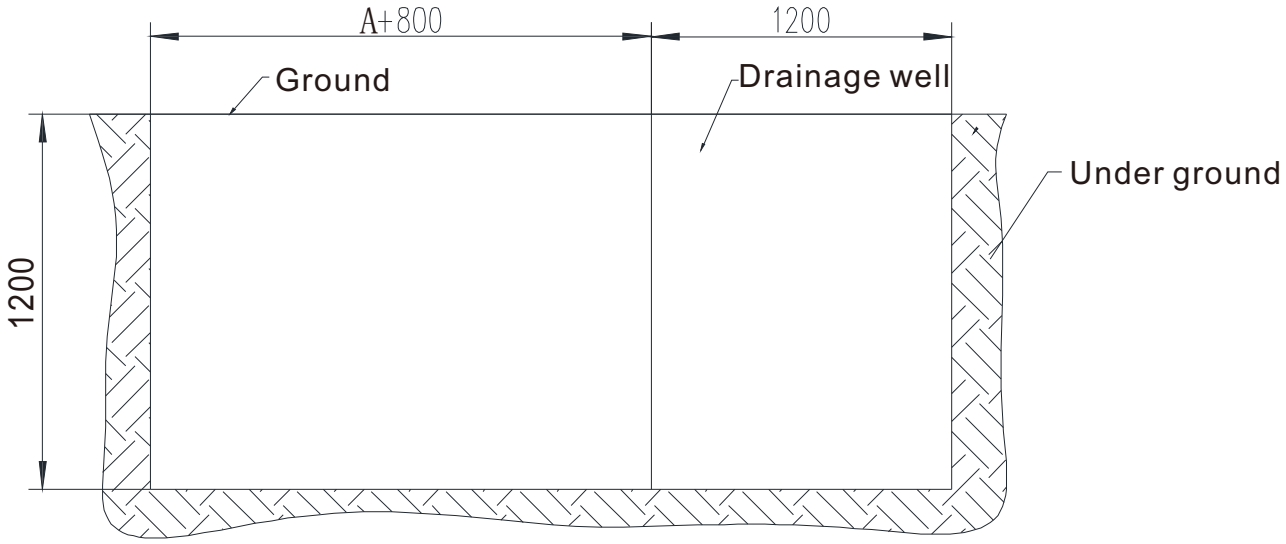
5. Installation layout

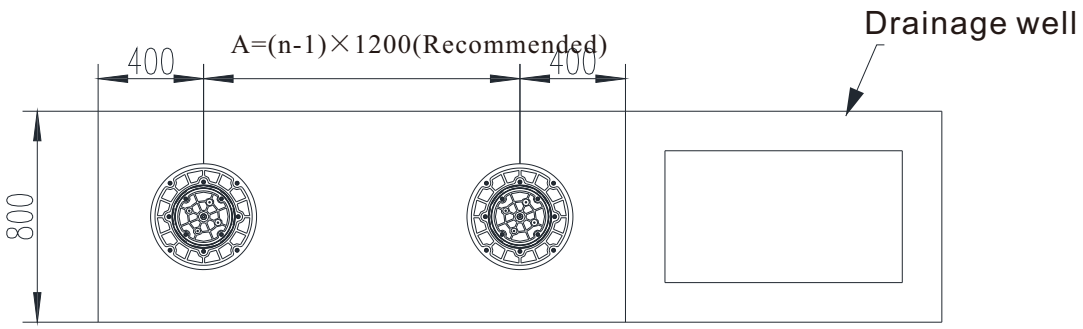


① Bollard
② Control unit
③ Three button hand-held Remote
④ Water pump (Optional)
⑤ Φ50mm PVC Drain pipe(Optional)
⑥ Φ32mm PVC cable pipe(Optional)

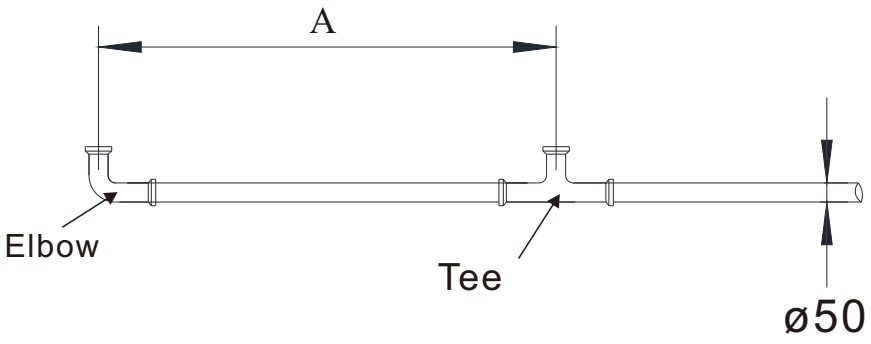
6. Installation

6.1. Dig the foundation as following picture.
n=number of bollard
A=distance between each bollard center



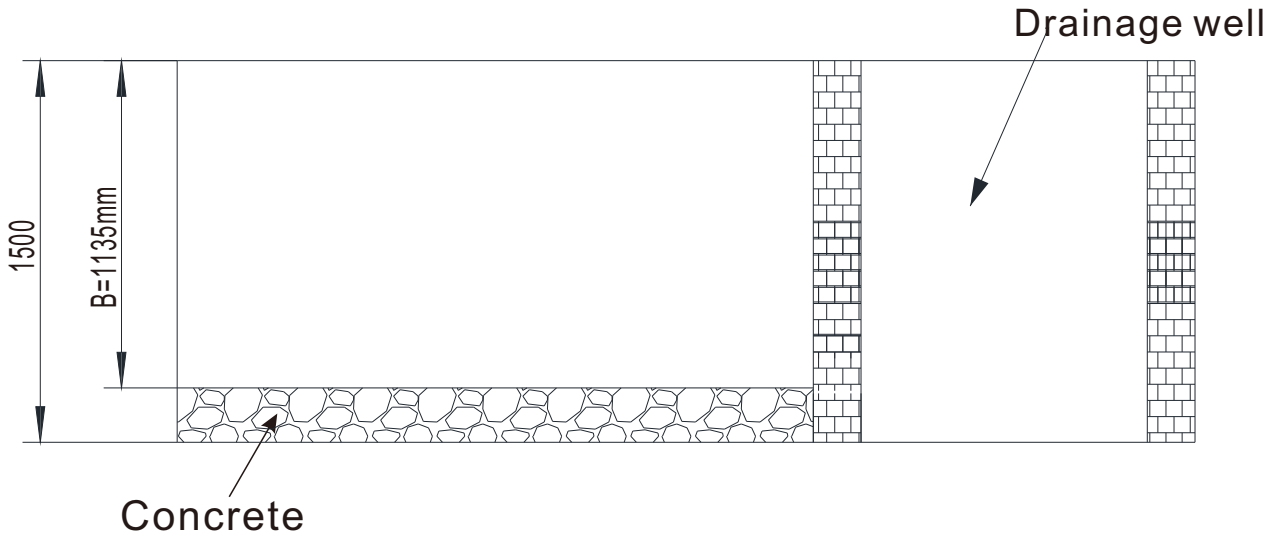


6.2. Assemble Drain pipe: ø50mm(PVC),

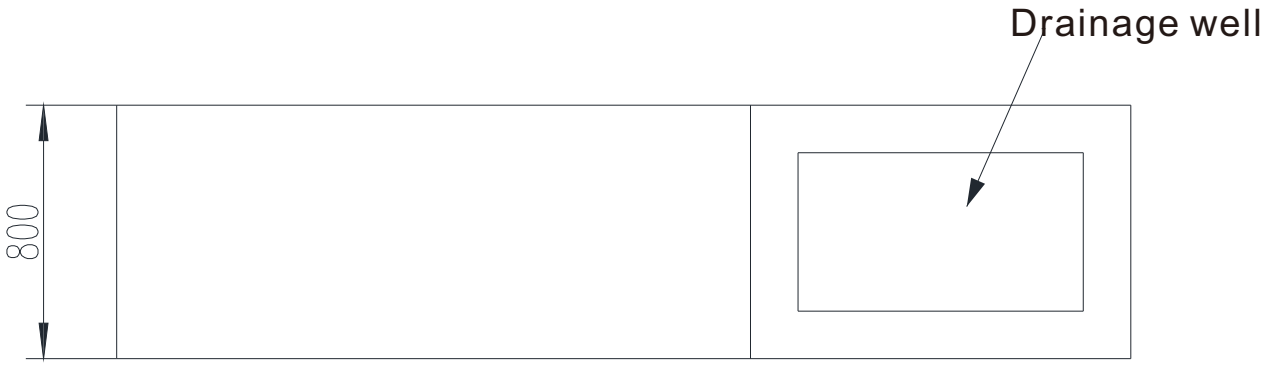


6.3. Install PVC drain pipe

Fill with sand and concrete, make sure the B=1135mm.

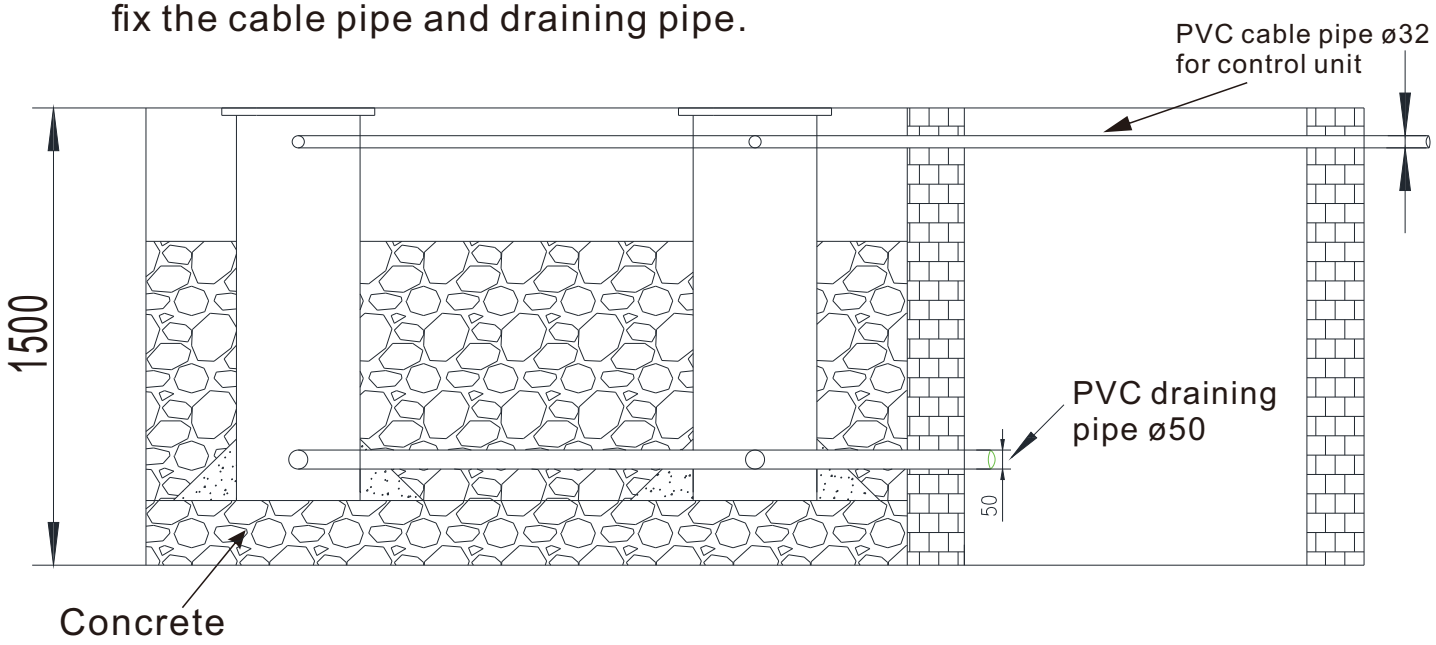


Top View

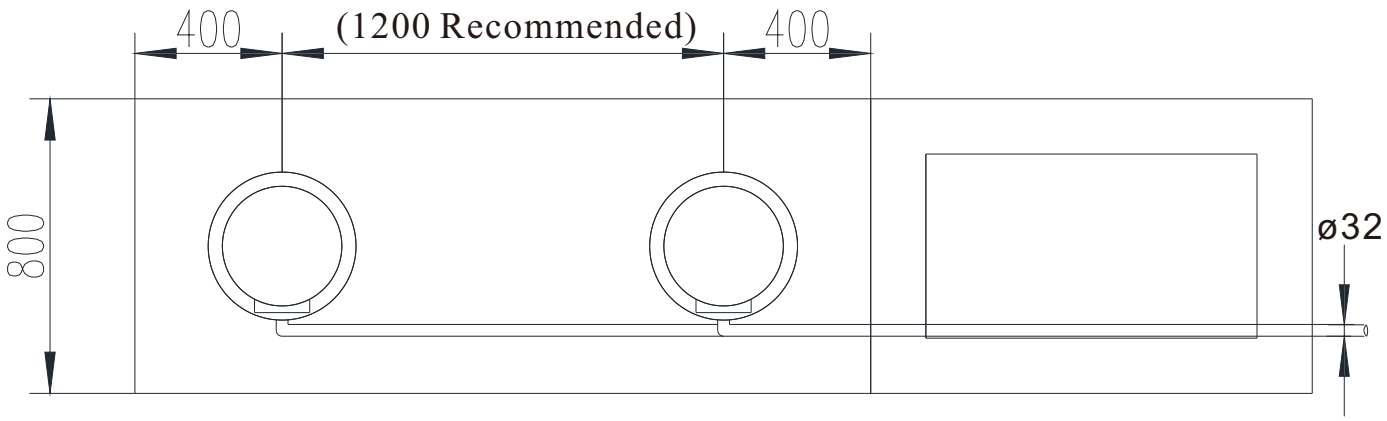


6.4. Install foundation case.

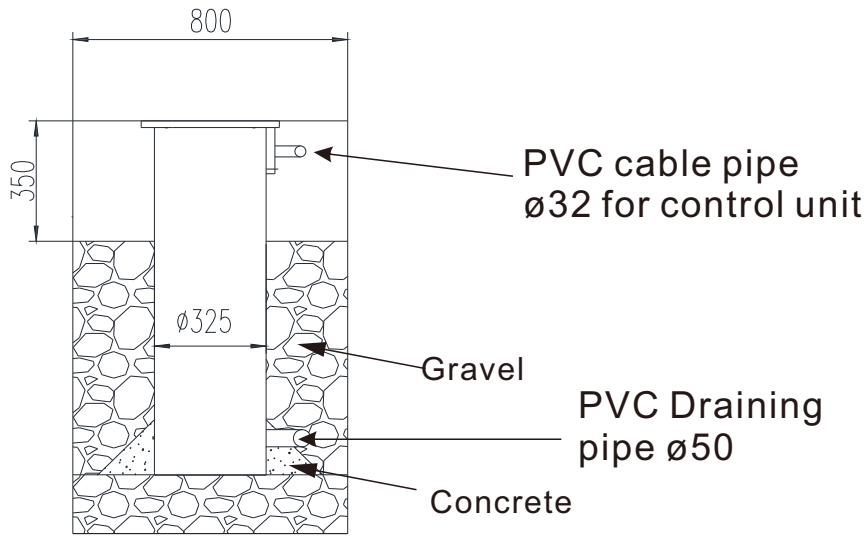
Fill with concrete, all bollards must be in one line, fix the cable pipe and draining pipe.



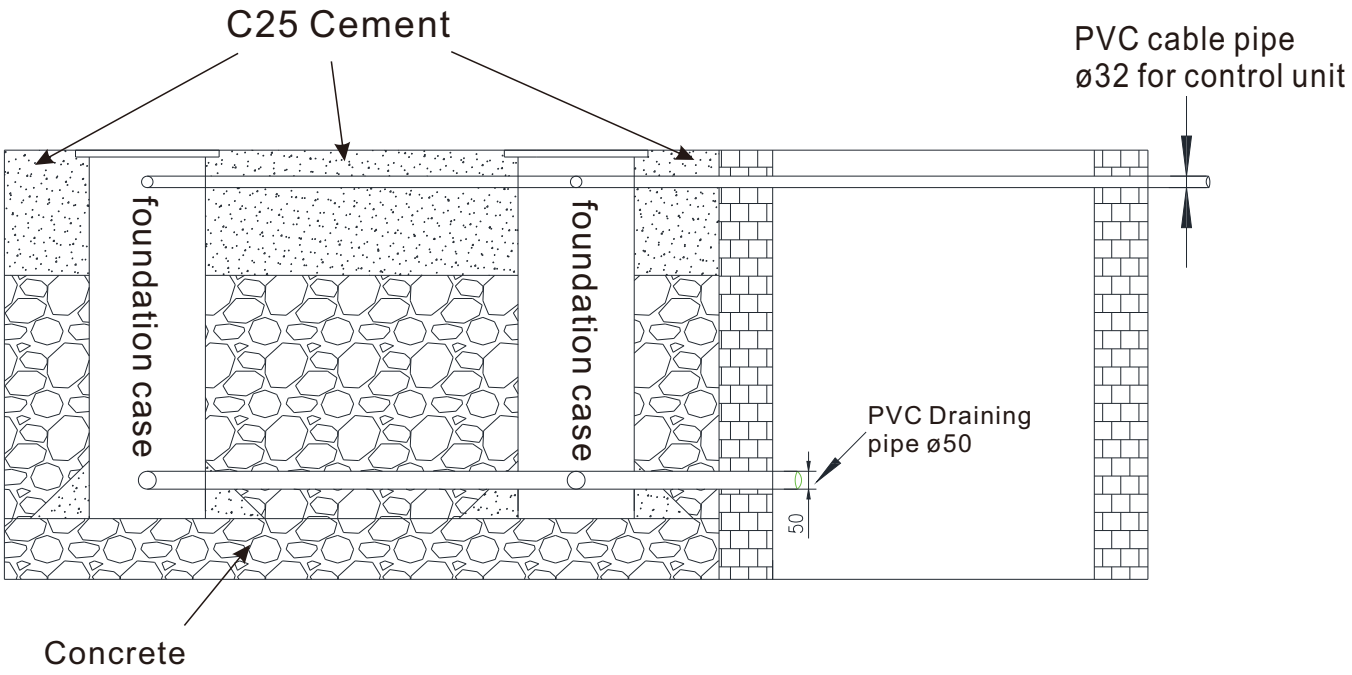
Top view:



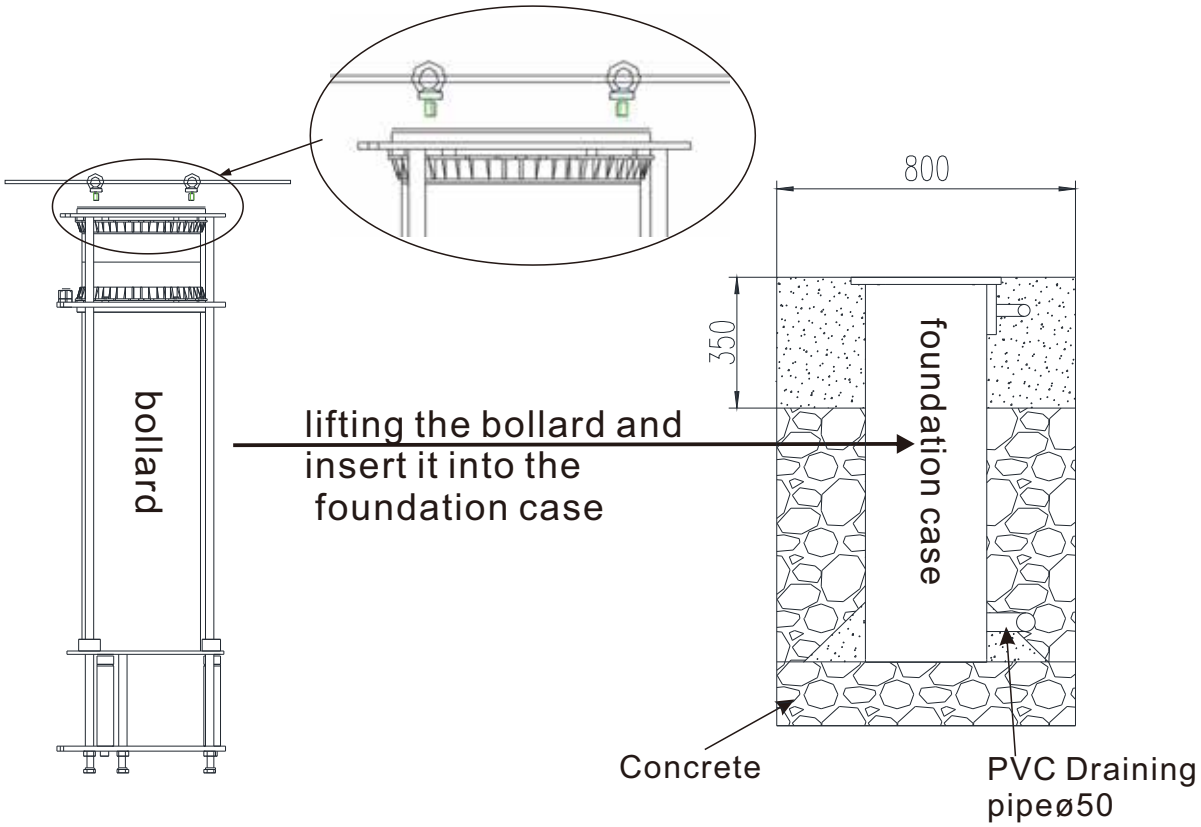
Lateral view:



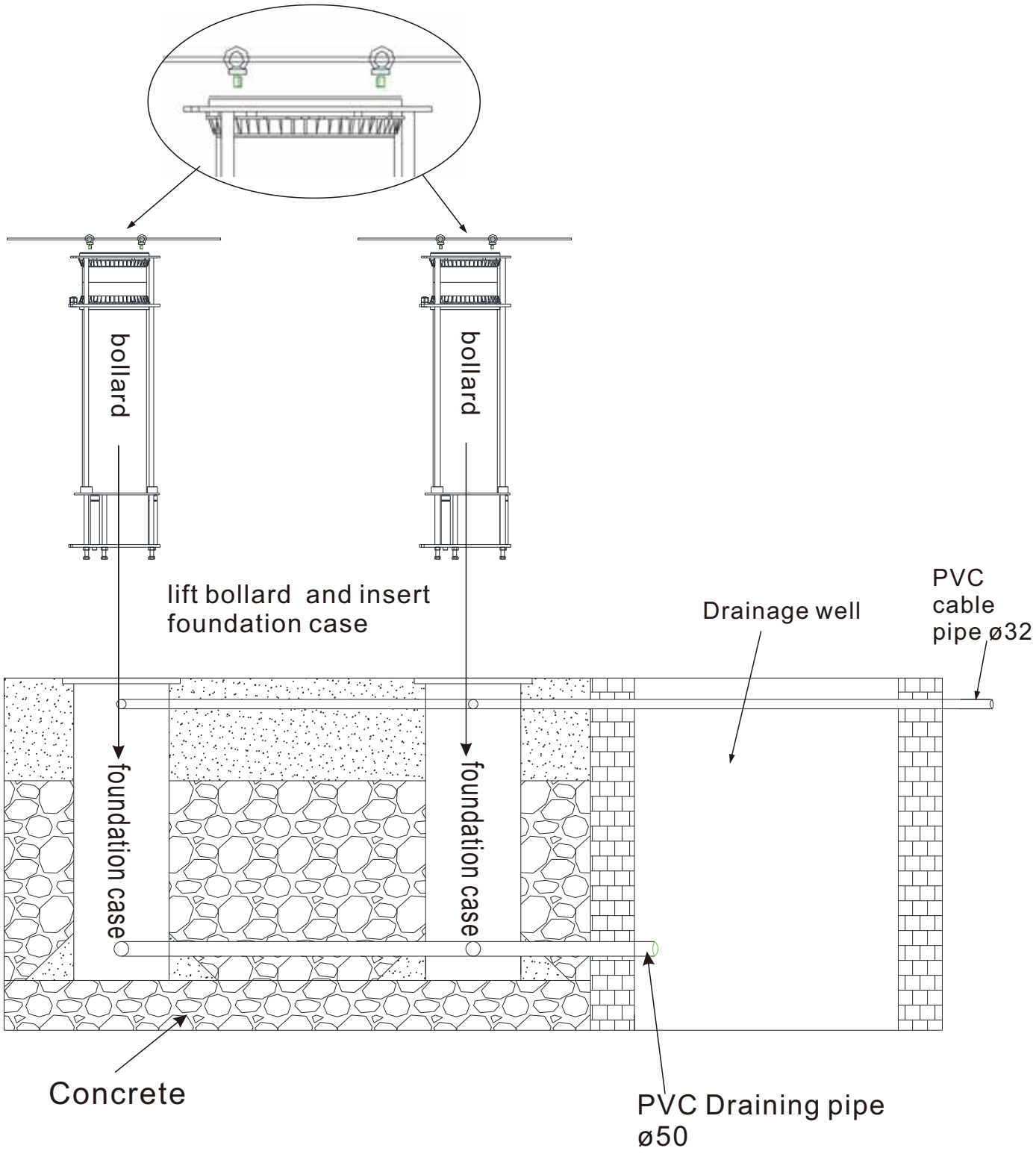
6.5. Fill concrete with No.C25 cement, Attention: fix the cable pipe, don't make the cable pipe bent or broken.



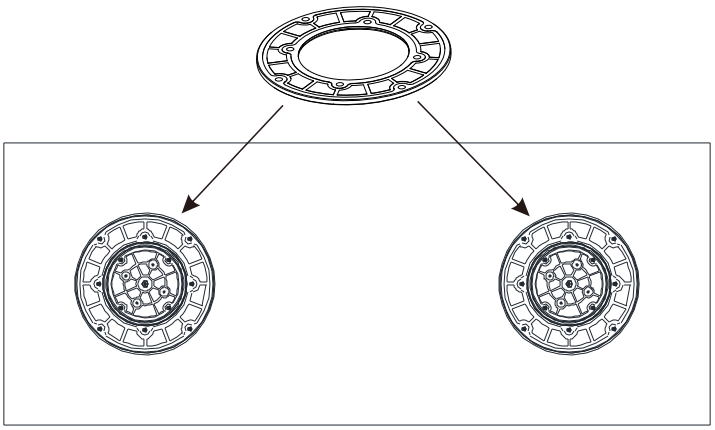
6.6. Lifting the bollard(Using the M8 lifting eye bolts 2pcs)



6.7. A standard Bollards Diagram

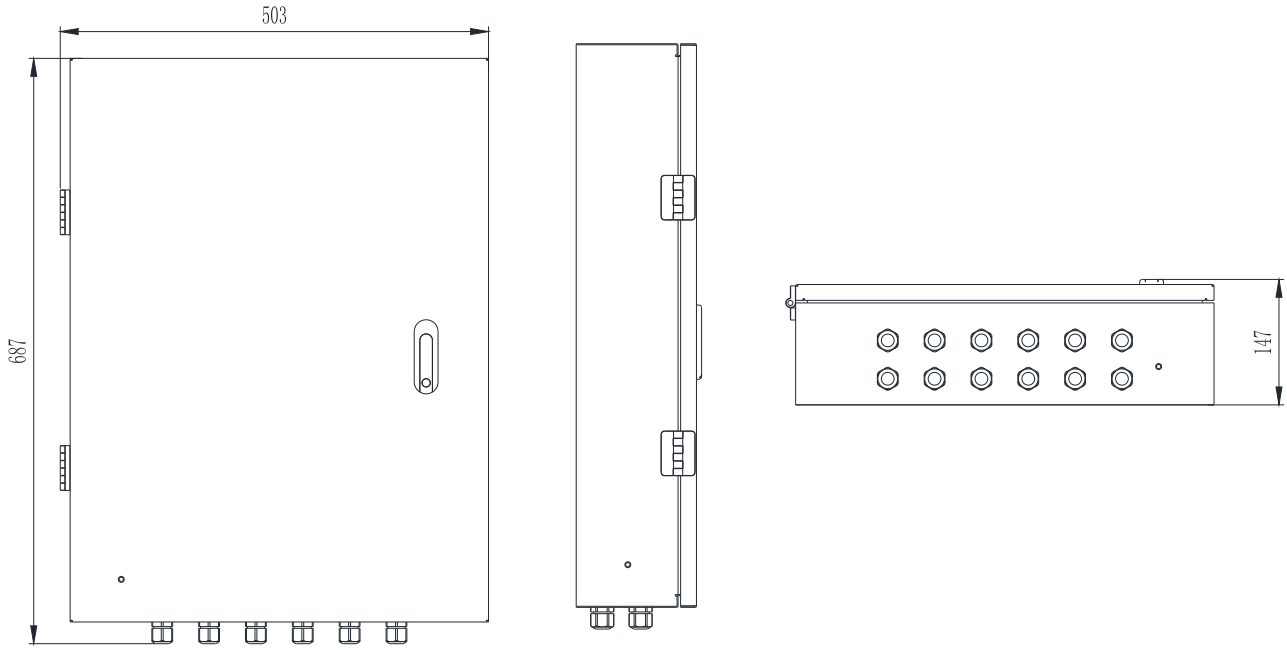


6.7. Connect the cable through the ø32mm PVC cable pipe, then fix the cove of foundation(8-M8).

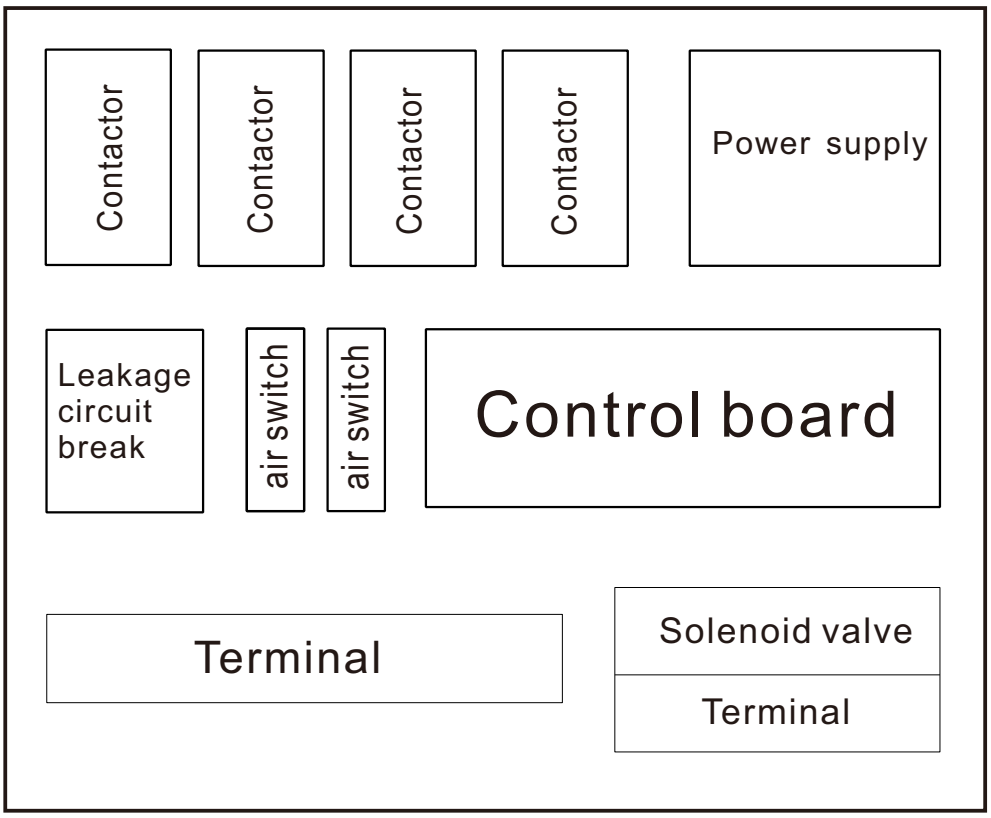


6.8. Install the control unit in an appropriate place, connect wires refer to the wiring diagram in Page13.

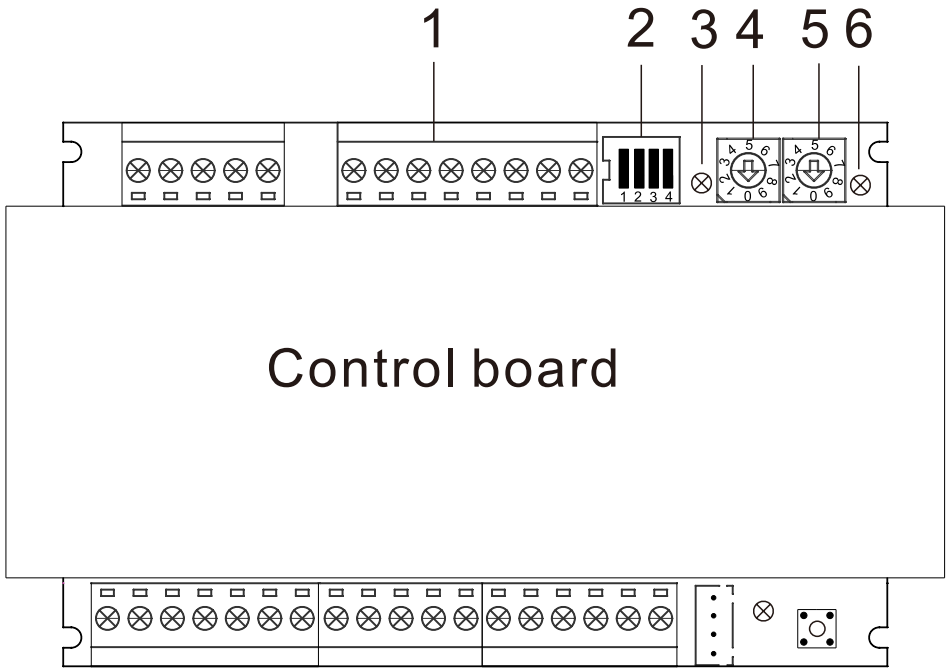
7. Control unit



7.1. General diagram of control unit.

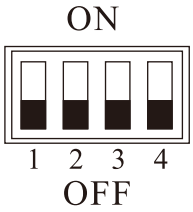


7.2. General diagram of control board.



1. Terminal strip
2. Dip switch
3. Led of down state
4. Rotary switch of down moving time
5. Rotary Switch of up moving time
6. Led of up state

7.3. DIP switch programming



DIP1:
ON: Photocell and loop detector function of group #1 is available.
OFF: Photocell and loop detector function of group #1 is unavailable.

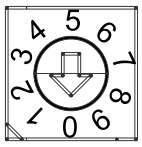
DIP2:
ON: Photocell and loop detector function of group #2 is available.
OFF: Photocell and loop detector function of group #2 is unavailable.

DIP3:
ON: Auto test mode: power on, the bollard auto up and down 3 cycles then stop.
OFF: Close auto test mode

DIP4:
ON: Linkage mode:
synchronize the movement of group #1 and group #2.
OFF: No linkage mode.

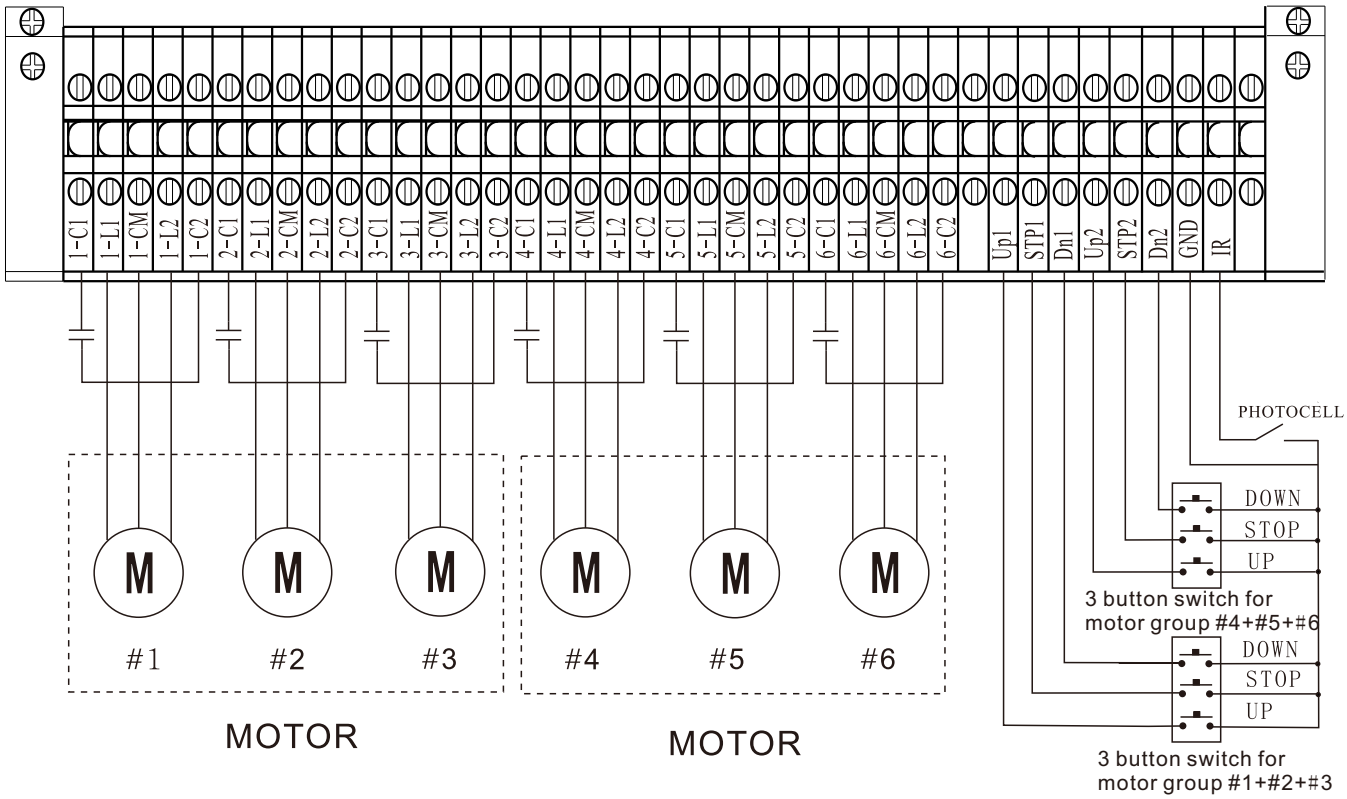
7.3.Led and Rotary switch

1. Led of down/up state: when bollard is working, the led will be on, and be off till stop.
2. Rotary switch of down/up moving time, factory setting is 4.



Rotary switch of down/up working time:
0----> bollard down/up moving for 1 second.
1----> bollard down/up moving for 2 second.
3----> bollard down/up moving for 3 second.
4----> bollard down/up moving for 4 second.
5----> bollard down/up moving for 5 second.
6----> bollard down/up moving for 6 second.
7----> bollard down/up moving for 7 second.
8----> bollard down/up moving for 8 second.
9----> bollard down/up moving for 9 second.

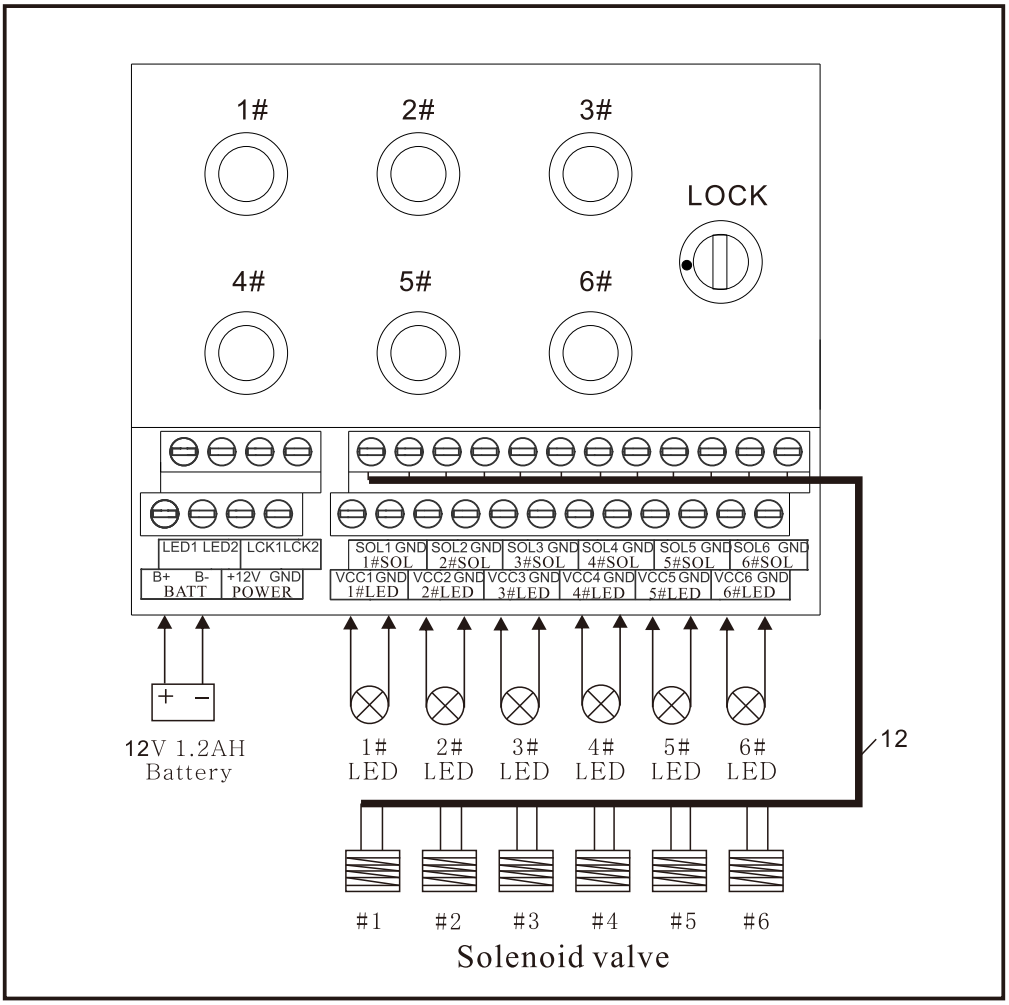
8. Wire connection of control box



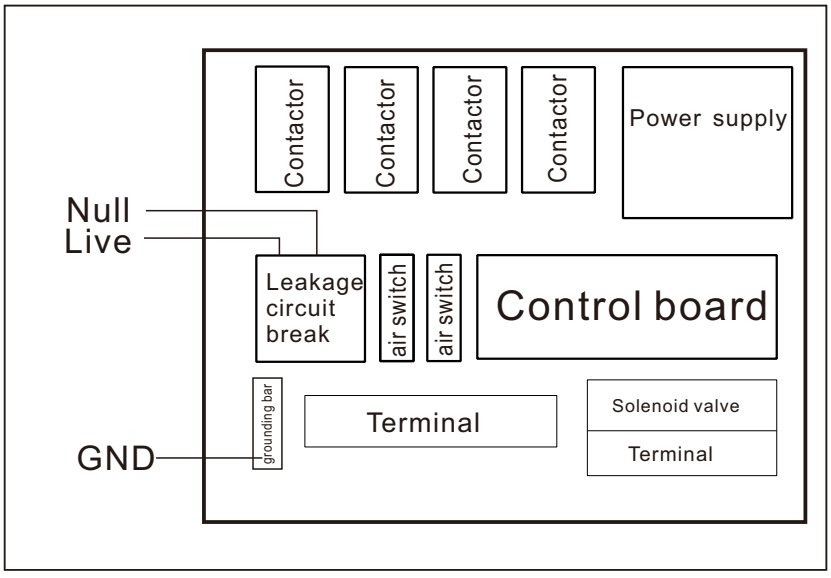
Note: input power and motor wires are 220V, others are 24V.

9. Wire connection of electromagnetic valve

Electromagnetic valve(Down the bollard when power failure)



High voltage input wiring diagram



10. Maintain

a. The working temperature should not be over 70℃.
b. In the process of operation, such as any abnormal phenomenon all should immediately stop, shall not impose operation, less produce needless loss.
c. Regular checking the main components.(1 time per month)

12. Trouble shooting

No.	Trouble	Cause	Shooting
1	The power light is not on.	No power	Power on.
		Wire is broken or lose.	Check and reconnect wire.
2	Bollard is not pressure or doesn't work.	Mechanism is broken.	Change the mechanism.
3	Bollard is working incorrectly.	There is something wrong with control board.	Inspect control board by professional electrical person.
4	The motor doesn't run or doesn't run one direction.	Wire is broken or lose.	Check and reconnect motor wire.
5	Big noise from contactor inside of control box.	Voltage is too low	Increase the voltage to 220V+/-10%
6	The working direction of bollard is wrong.	Mix connect the motor wire.	Connect the wire correctly
7	Leakage protector tripping during operation	No insulation at the wiring, cause the trip.	Make correctly protection, and sure the wires are properly insulated.