Automatic Bollard 36V DC Brushless Motor Driving
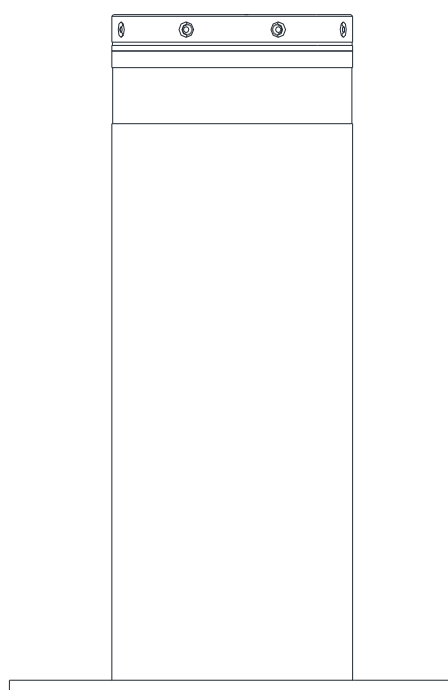
⚠ Bollard is not for Pedestrians

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.
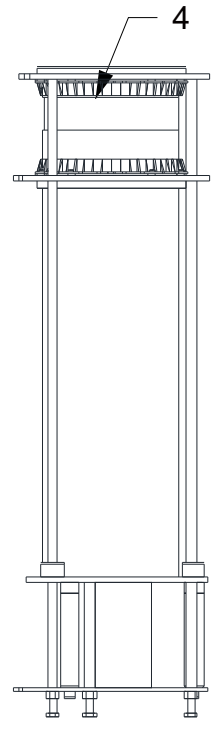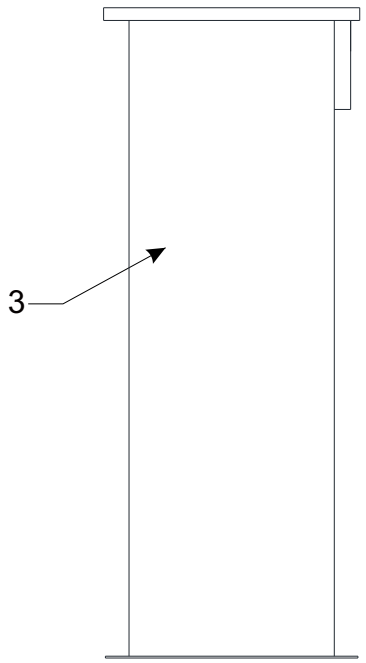
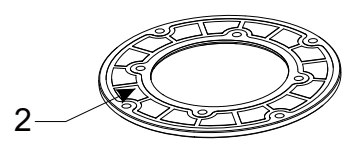10. Please keep this manual for maintenance reference.

⚠ Bollards are not for Pedestrians!

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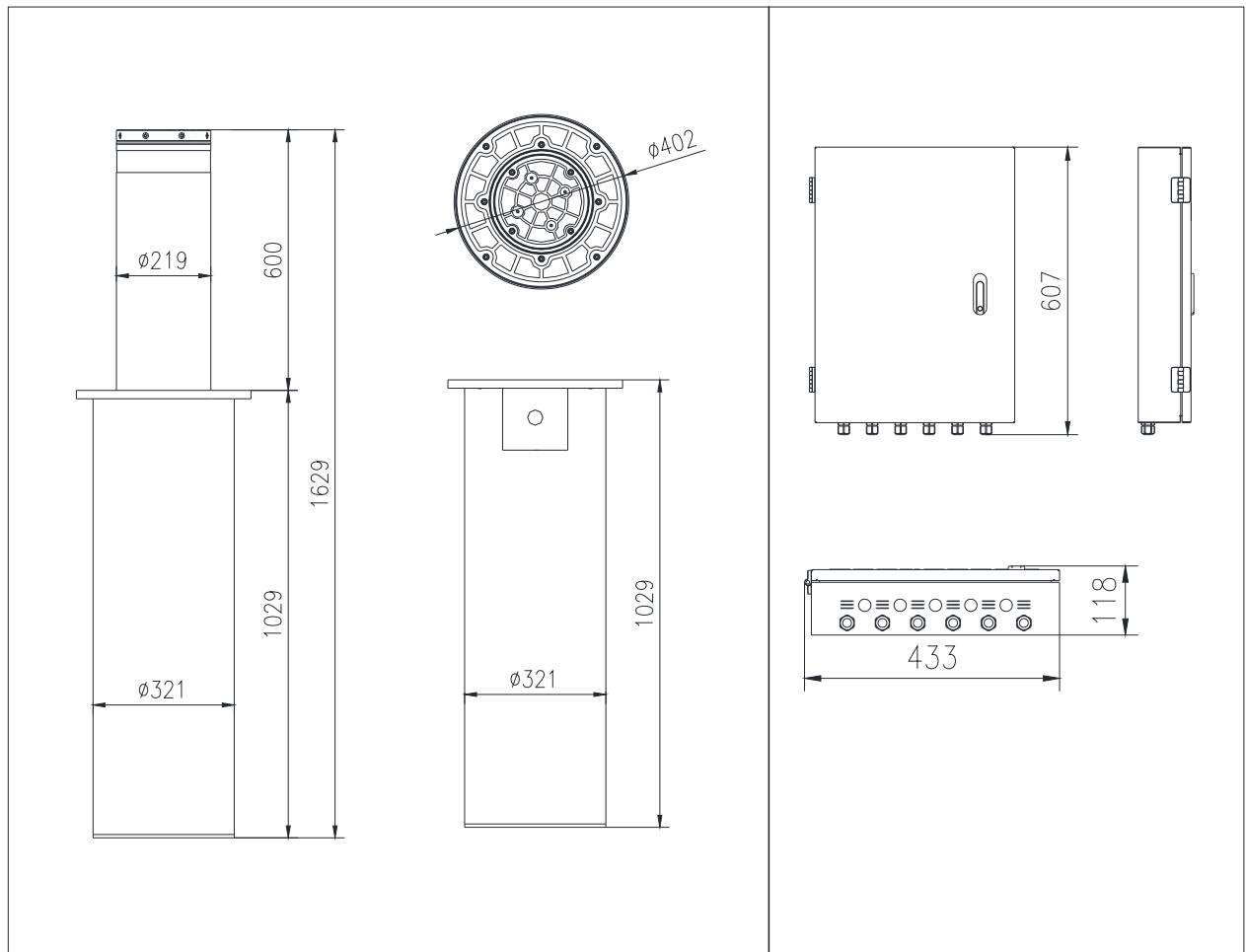pedestrian traffic to a separate walk-through gate.

1. Structure

1 →

2 —

3 —

4

① Screw

② Lid of foundation case

③ Foundation case

④ Cylinder
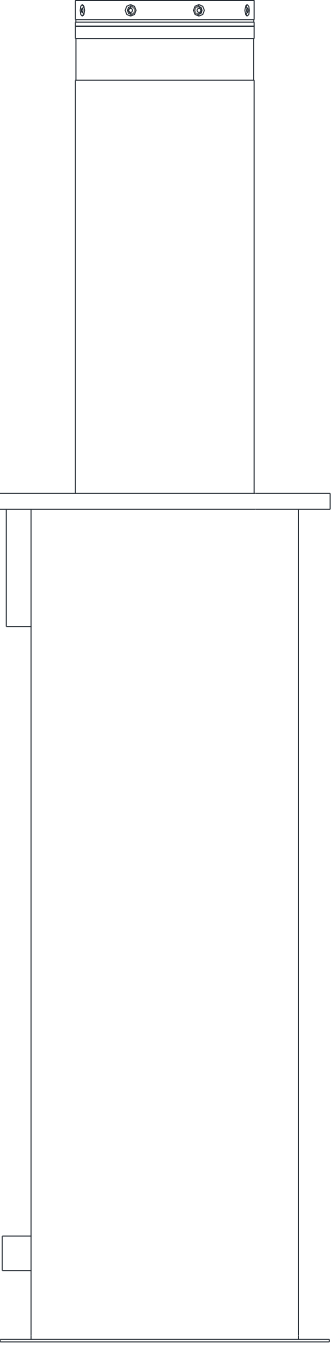
2. Technical data

Motor Power	DC36V/350W
Driving mode	Electric motor
Warning Sign	LED light + Reflective tape
Up/down time	4S
Lift height	600mm
Operating	Push-button
Working environment	-30℃~55℃

3. Dimensions(unit: mm)

Lifting eye bolt **2**pcs

Inner Hexagonal screw(backup) **4**pcs

Inner Hexagon wrench **1**pcs

Release handle **1**pcs

Automatic Bollard
🔲
Manual

Manual **1**pcs

Bollard **1** pcs

5. Installation layout

① Bollard
② Control unit
③ Three button hand-held Remote
④ Water pump
⑤ φ50mm PVC Drain pipe
⑥ φ32mm PVC cable pipe

6. Installation

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

A+800   1200

Ground   Drainage well

Under ground

1200

A=(n-1)×1200(Recommended)

Drainage well

400   400

800
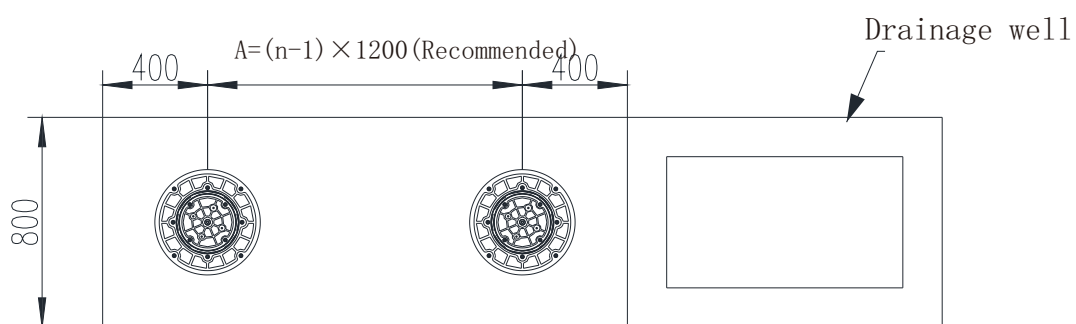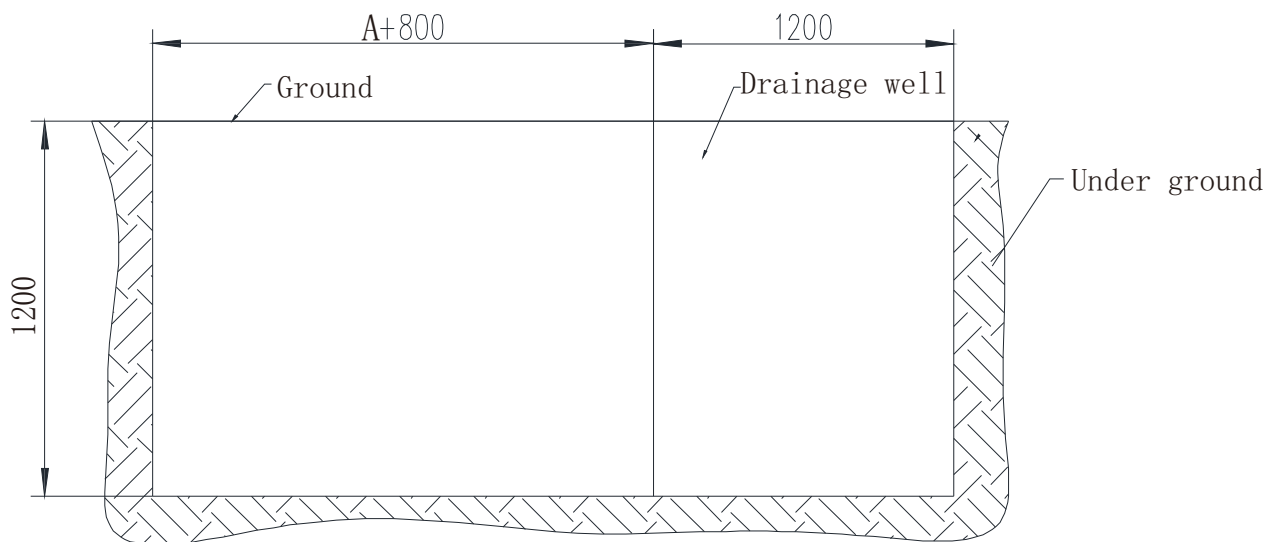
6.2. Assemble Drain pipe: ø50mm(PVC),

A

Elbow

Tee

ø50
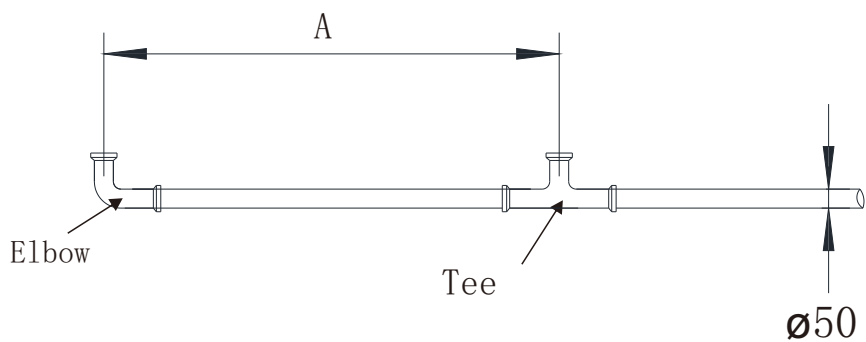
6.3. Install PVC drain pipe

Fill with sand and concrete, make sure the B=1029mm

Drainage well

1200

B=1029mm

Concrete

Top View

Drainage well

800
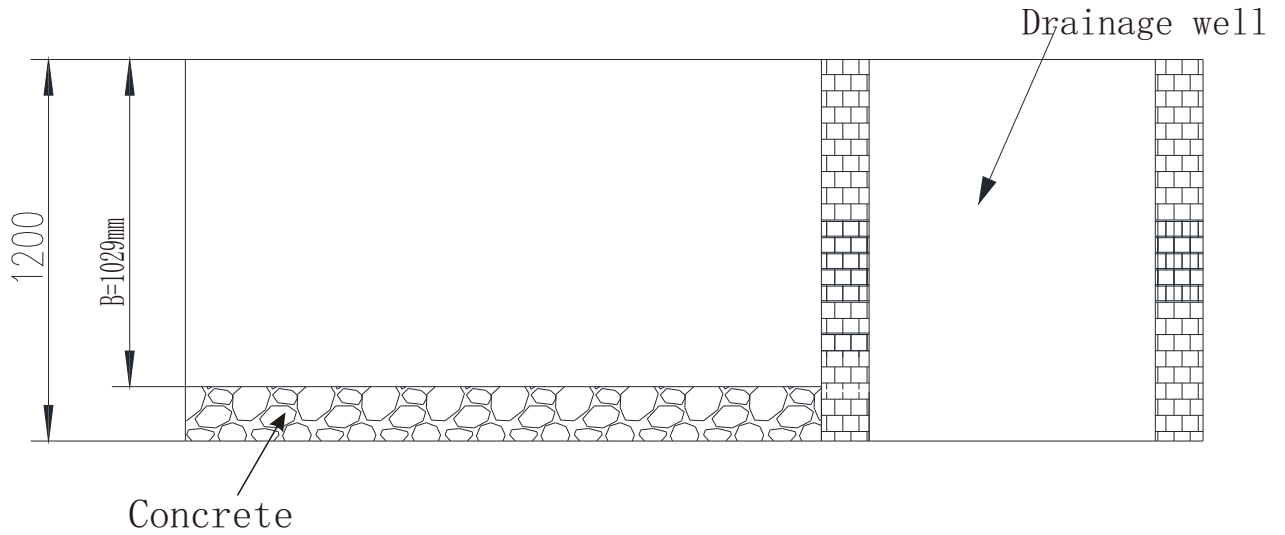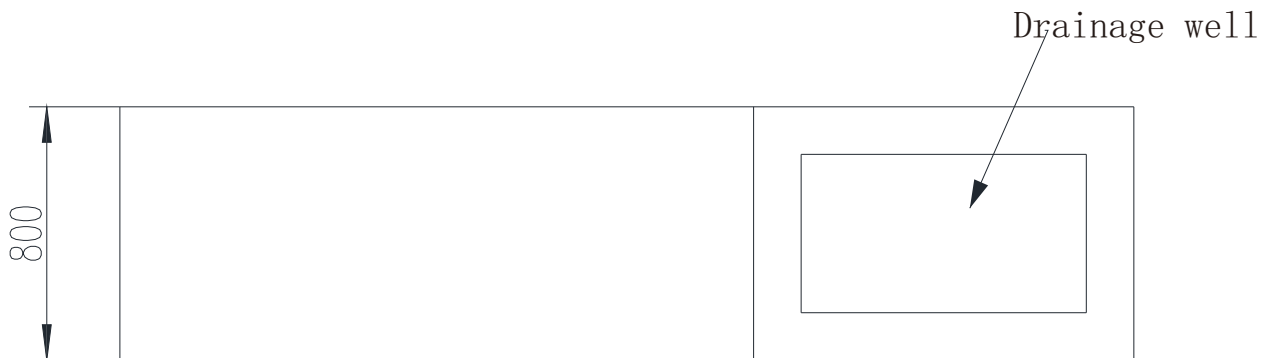
6.4. Install the foundation case.
Fix by concrete, all bollards must be in one line,

PVC cable pipe ø32
for control unit

PVC Draining
pipe ø50

1200

50

Concrete

Top View:

400   (1200 Recommended)   400

800

ø32

800

350

ø321

Gravel

PVC cable pipe
ø32 for control unit

PVC Draining
pipe ø50
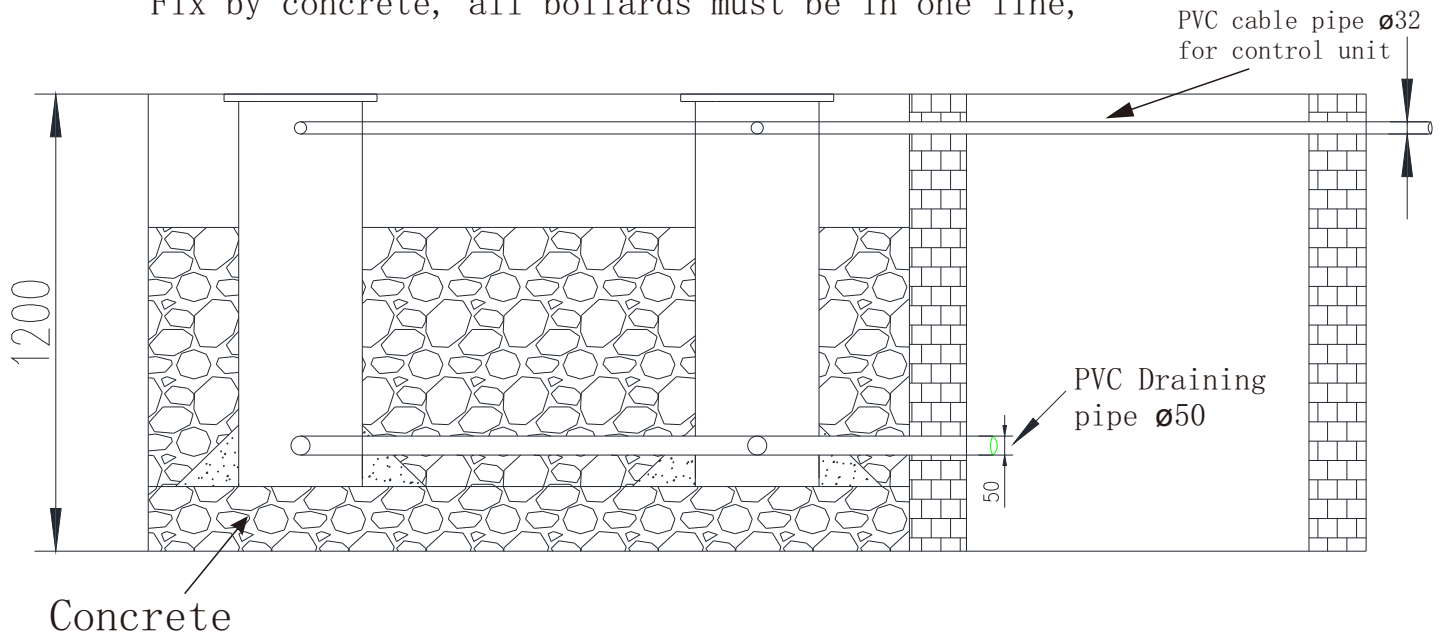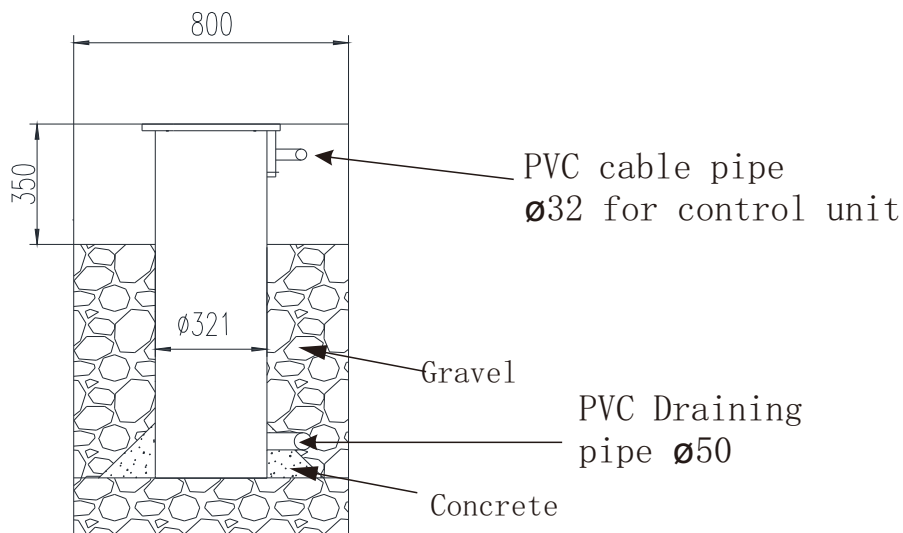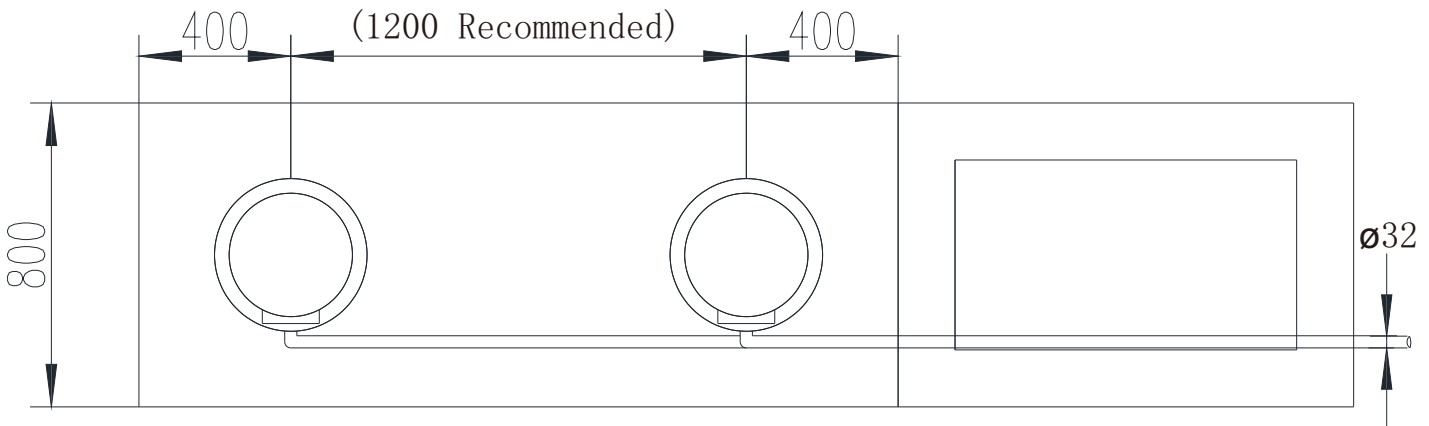
Concrete

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

C25 Cement

PVC cable pipe
ø32 for control unit

foundation case

foundation case

PVC Draining
pipe ø50

50

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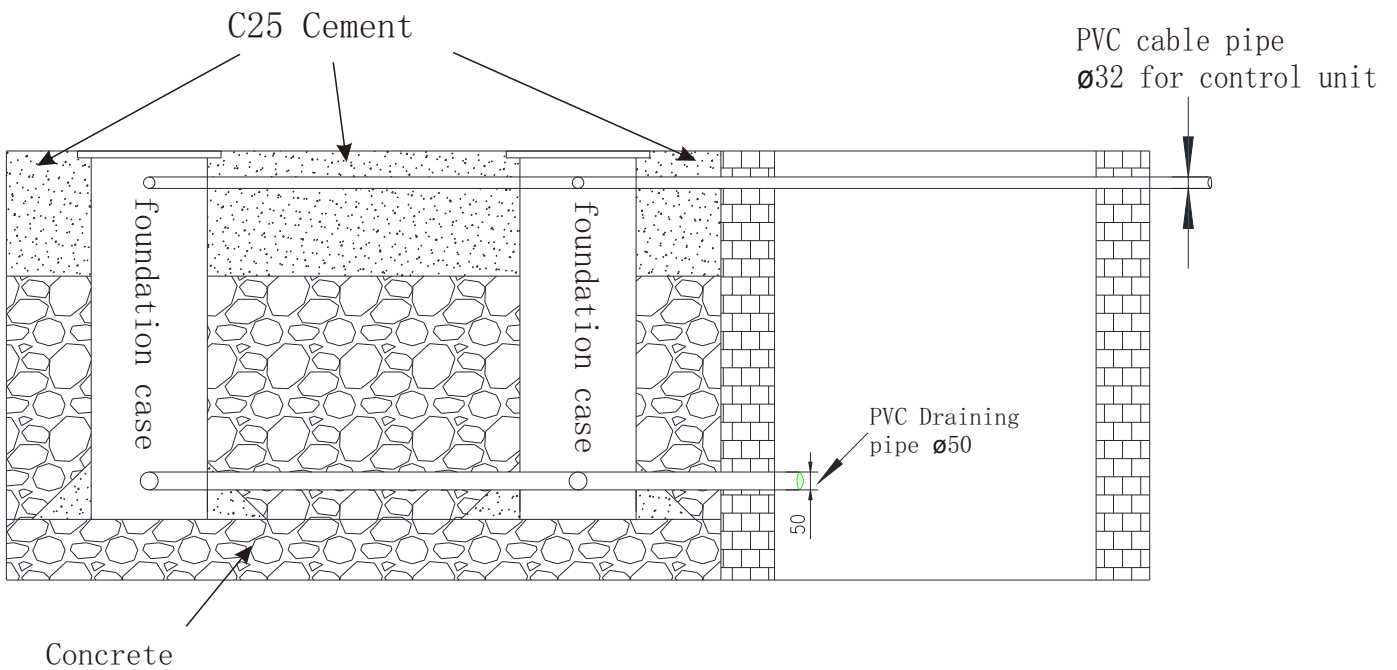
6.6. Lifting the bollard(Using the M8 lifting eye bolts 2pcs)

bollard

lifting the bollard and
insert it into the
foundation case

800

350

foundation case

Concrete

PVC Draining
pipeø50
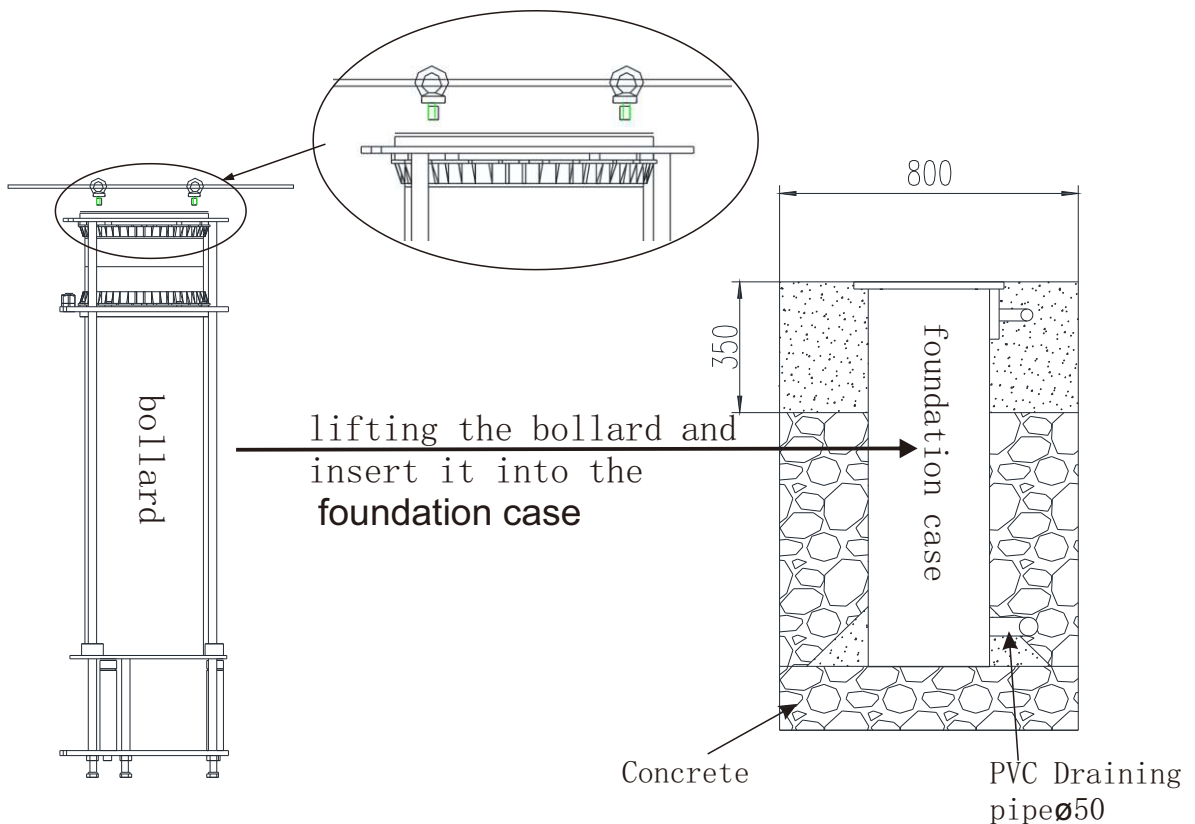
6.7. A standard Bollards Diagram

bollard

bollard

lift bollard and insert
foundation case

foundation case

foundation case

Drainage well

PVC
cable
pipe ⌀32

Concrete

PVC Draining pipe
⌀50
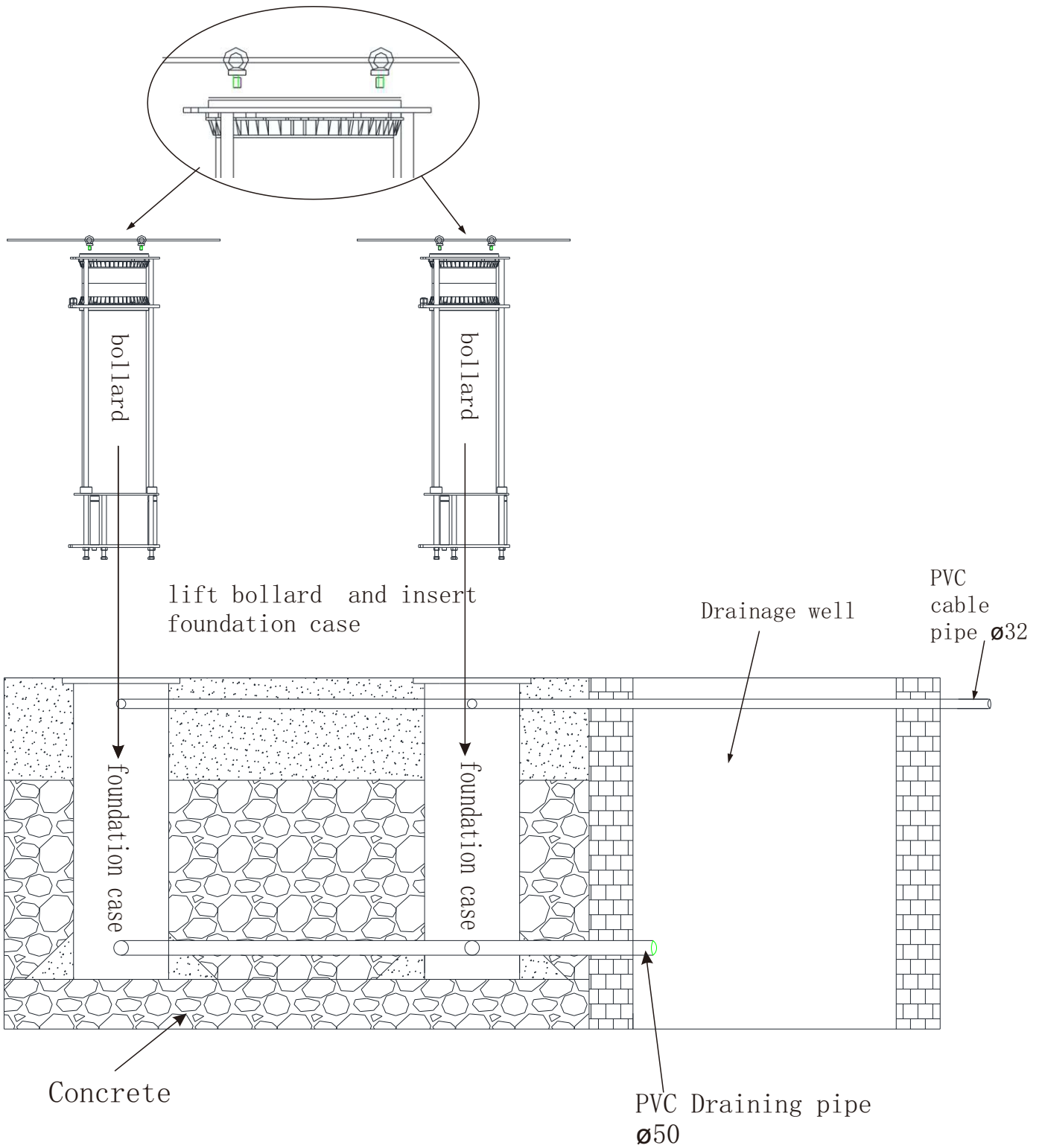
6.7. Connect the cable through the ⌀32mm PVC cable pipe, then fix the Lids of foundation cases(8-M8).
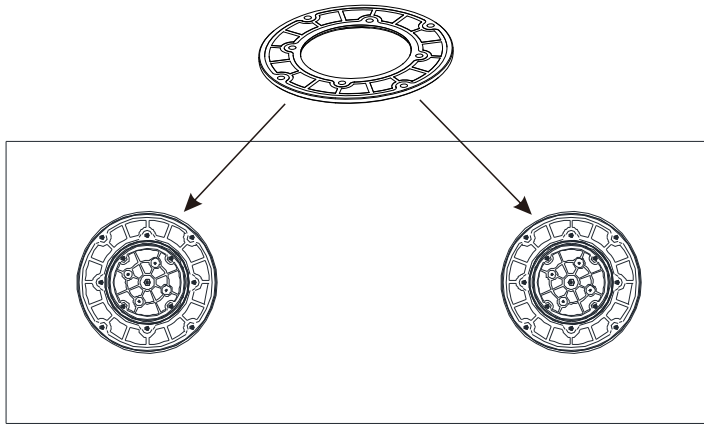
6.8. Install the control unit in an appropriate place, connect wires refer to the wiring diagram in Page11.

7. Up and Down manually

In case of power failure, the bollard can be up and down manually by release handle.

Attention: The power must be cut off!

Step:
1. Power off, remove the plug and gasket.
2. Fix the release handle by 2 screws as picture, rotate the handle, clockwise=down, anticlock wise=up

down   up

Release handle

Bollard

Plug and gasket

8. Wire connection

Power supply DC36V

Power supply DC36V

Power supply DC36V

DC36V Bat

Switches

0 1 2 3 4 5 6

N

AC220V

L

Bollard 1 Bollard 2 Bollard 3 Bollard 4 Bollard 5 Bollard 6

O 36V A B   O 36V A B   O 36V A B   O 36V A B   O 36V A B   O 36V A B

GND 36V A B   GND 36V A B   GND 36V A B   GND 36V A B   GND 36V A B   GND 36V A B
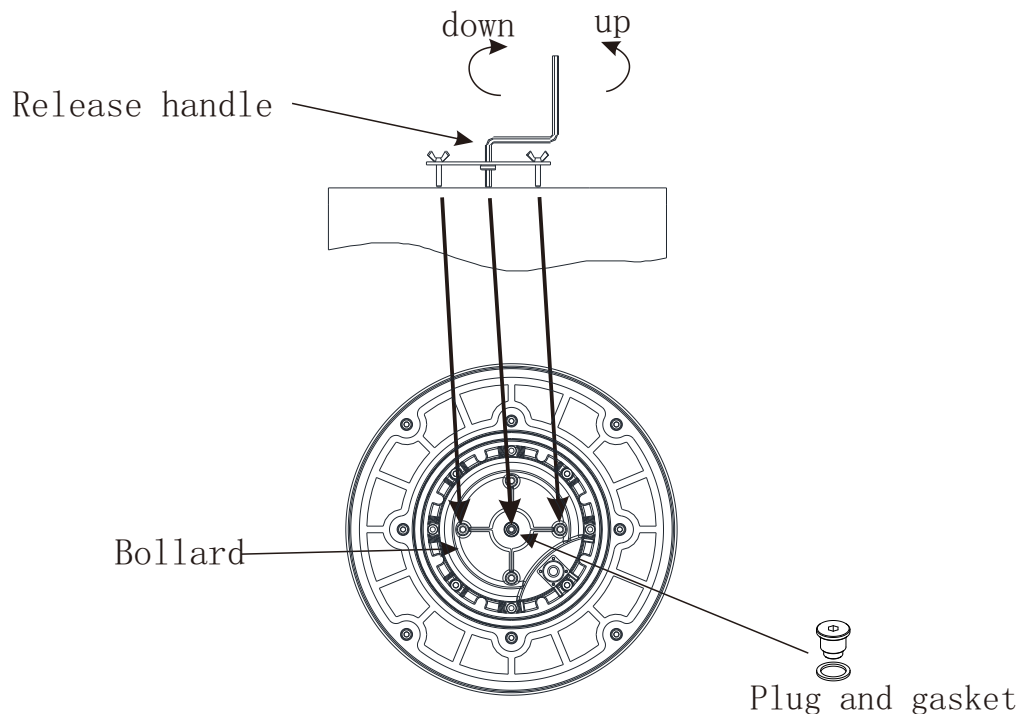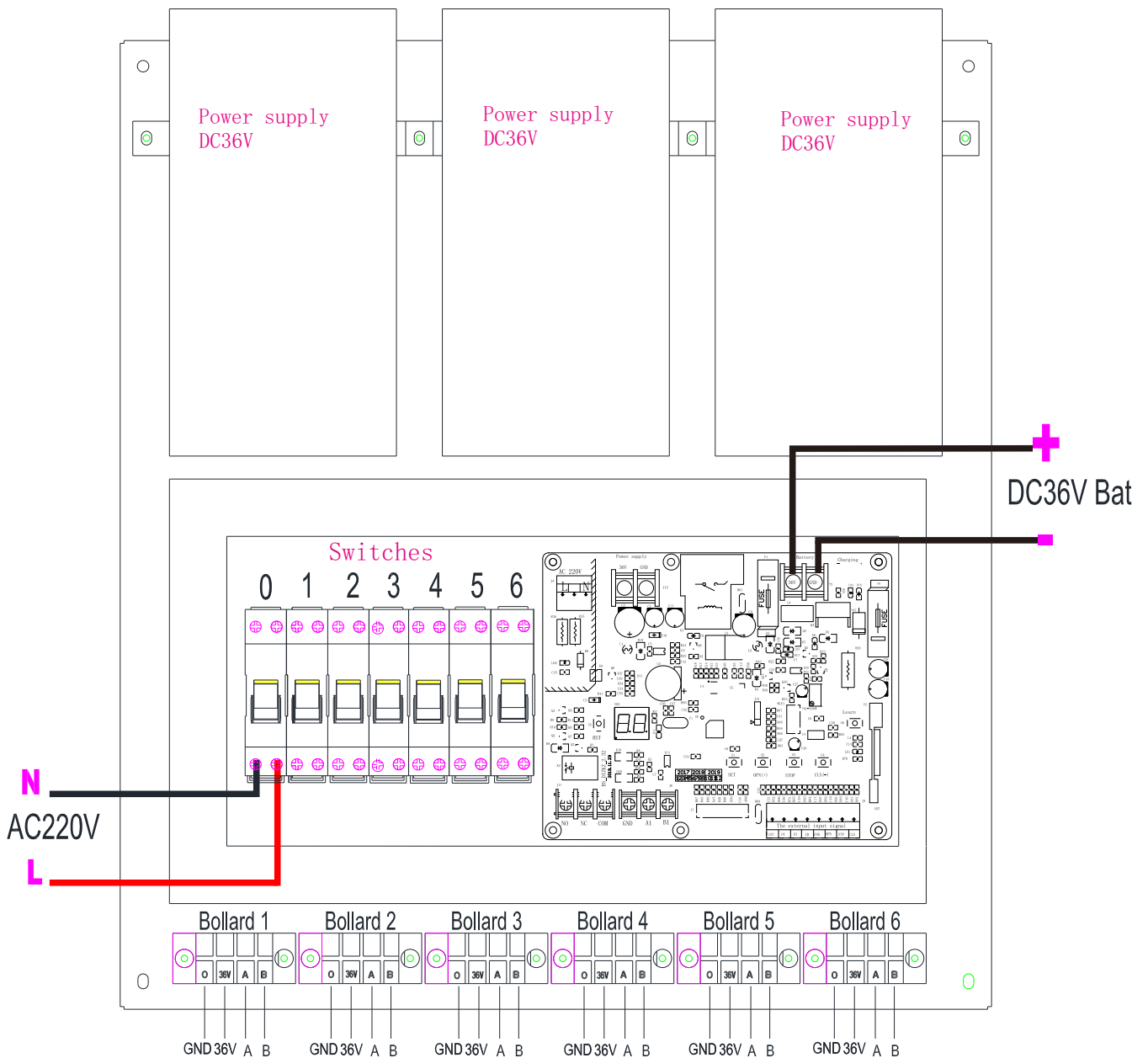
connectors of controller	GND	36V	A	B
bollard wires	black	red	yellow	blue

Mark: the wires for each bollard are the same.(bollard1, 2, 3, 4, 5, 6)

Attention: After connecting, power on, turn on switch No.0, display"--",
3 seconds later, turn on switch No.1, display"01".
3 seconds later, turn on switch No.2, display"02".
3 seconds later, turn on switch No.3, display"03".
3 seconds later, turn on switch No.4, display"04".
3 seconds later, turn on switch No.5, display"05".
3 seconds later, turn on switch No.6, display"06".

9. Parameter setting

9.1. General diagram

DC36V Bat

Learn Button
for remote

Set and
Control Buttons

External input
signal terminals

UP

STOP

DOWN

Key Box

GND

UP

STOP

DOWN

3 button switch
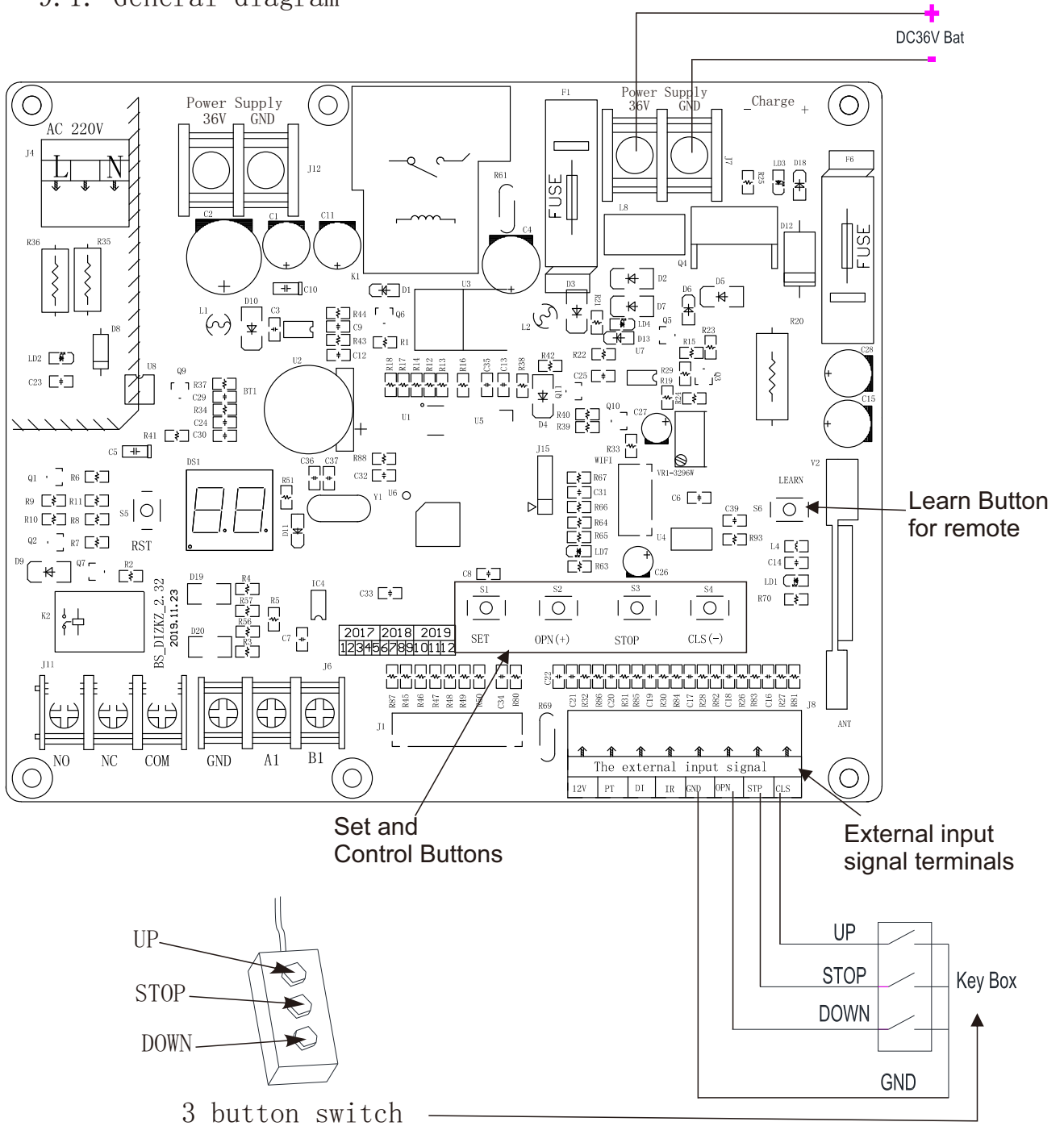
Remark: Power o ffbefore connecting, turn on the air switch each 2-3s by number after connecting, display"01"- "06" means connecting well.

9.2 Parametors of Function and Time Resetting

Power on

↓

Shortly press "Set"

↓

Display "77"

↓

Press "Open" or "Close" to change value

↓

Display "79" or "81"

↓

Press "Set"

"79" : Function Parameter

"81" : Timer Parameter

Press "Open" or "Close" to change corresponding value

Press "Stop"

↓

End
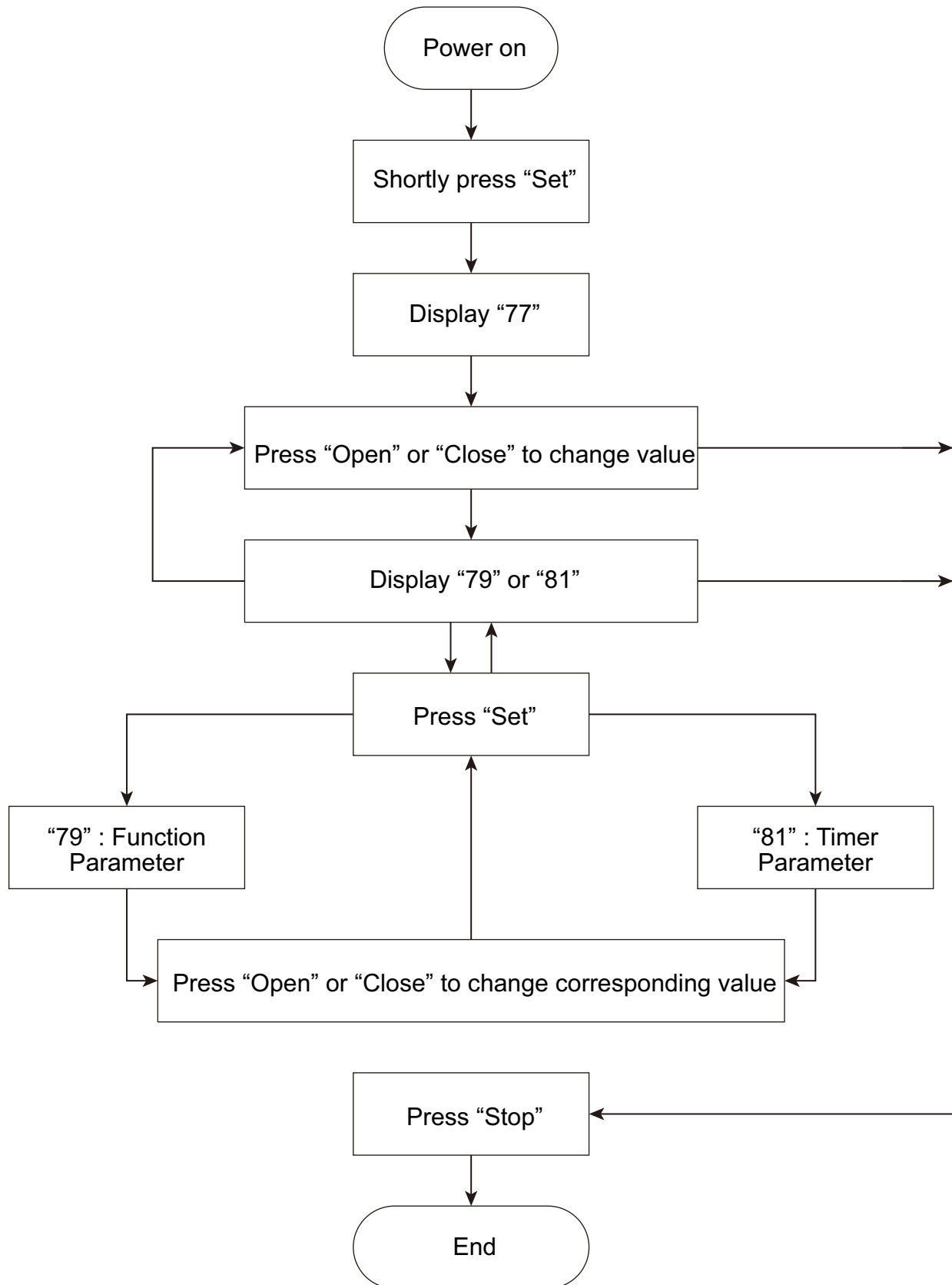
9.3 Function Definition

F0	Factory Setting (Caution!)
F1	Reserved
F2	Reserved
F3	Auto-Close Timer (s). Max.: 99s. Default: 00 (Means auto-close function disabled)
F4	00: Normal Mode (Default). 01: Counting Mode.
F5	00: Normal Mode (Default). 01: Stay OPEN.
F6	Reserved
F7	Reserved
F8	Signal Input Mode. 00: N.O. (Default). 01: N.C.
F9	Alarm or Light. 01: Light (Default) 00: Alarm.

9.4 Timer Definition

A0	Year
A1	Month
A2	Day
A3	Hour
A4	Minute
A5	Second
A6	Light-on Hour. Default: 16
A7	Light-on Minute. Default: 00
A8	Light-out Hour. Default: 08
A9	Light-out Minute. Default: 00

9.5 Drive PCB terminal setting

```
                          ┌─────────────┐
                          │  Power on   │
                          └──────┬──────┘
                                 │
                          ┌──────▼──────┐
                          │ Long press  │
                          │   "Set"     │
                          └──────┬──────┘
  ┌─────────────────┐            │
  │ Press"Open" or  │            │
  │ "Close" to      ├────────────┤
  │ change value    │     ┌──────▼──────┐
  └─────────────────┘     │ Display "P1"│
                          │  or "P6″    │
                          └──────┬──────┘
                                 │
                          ┌──────▼──────┐
                          │ Press "Set" │
                          └──────┬──────┘
```

Remark:
P1=bollard1
P2=bollard2
P3=bollard3
P4=bollard4
P5=bollard5
P6=bollard6
the content of CA to CF should be read to related bollard

Press "Open" or "Close" to change value

Display "57" or "59"

Press "Set"

"57": H0-HE Parameter

"59" : C0-CF Parameter

Press "Open" or "Close" to change corresponding value

Press "Stop"

End

9.6 57 Parameter Definition

H0	Factory Setting (Caution!)
H1	Open speed Max
H2	Close speed Max
H3	Open speed Min
H4	Close speed Min
H5	Open force Min
H6	Reserved
H7	Open force Max
H8	Reserved
H9	Reserved
HA	Close force Min
Hb	Reserved
HC	Close force Max
Hd	Reserved
HE	Reserved

9.7 59 Parameter Definition

C0	Allowed Current Max
C1	Reserved
C2	Reserved
C3	Reserved
C4	Reserved
C5	Reserved
C6	Motor running forward or backward
C7	Max travel distance
C8	Led light exchange
C9	Reserved
CA	Version No.(P1-P6 separately)
Cb	First 2 digital number of working times: one working time=open/close once (P1-P6 separately)
CC	Second 2 digital number of working times: one working time=open/close once (P1-P6 separately)
Cd	Third 2 digital number of working times: one working time=open/close once (P1-P6 separately)
CE	Last 2 digital number of working times: one working time=open/close once (P1-P6 separately)
CF	Status of bollard

10. Trouble shooting

No.	Trouble	Case	Shooting
1	Bollard does not work when power on	Parameter not be set	Check parameter setting
		No power	Check the power supply
		The force is set too weak	Increase the current
2	Big noise	Motor is broken	Replace the motor