

Automatic Hydraulic Rising Bollard Manual

2Z-BOLLARD



 **Warning**

- Automatic hydraulic rising bollard is a type of complicate equipment, please notify company when meet malfunction in operation.
- For to prevent product structure damage, forbid disassemble equipment.
- This product used with hazardous voltage, whole system need periodically inspect, prevent personal injury.
- Correct wiring connection according to directions, to prevent equipment damage.
- Please turn off power immediately when encounter any abnormalities in commissioning.

Product Profile

Introduction

Automatic hydraulic rising bollards , a type of anti-crash security barrier. Automatic bollard Integrates hydraulic rams inside, compare to traditional rising bollard with hydraulic power unit, have easy installation, save budget, after-sales easy maintenance several advantages, connect with control system and main power can operate directly.

Standard bollard cylinder material is 304 stainless steel, assure corrosion and rust resistance. Cooperated with SGS company, our automatic bollards passed series of tests to guarantee bollard stable work ability, including continues 5000 lifting test, IP68 water proof and dust proof test, temperature test. According to different types, equipment rising time could range from 1s until 3 seconds. With emergency release system, power outage or other emergencies, can be artificially lower, release vehicles.

Automatic rising bollard is suitable for high-frequency, high-security vehicle access places. Applied to the parks, government organizations, airports, military bases, car parks and other areas.

Features

1. Easy installation and low installation cost
2. No additional drive system, have nice overall appearance
3. Can be fallen without electricity
4. No requirements about distance of bollard body and control system
5. Available of each bollard individually operate

Basic Technical Parameters

1. Input Voltage: 380V(Three-phase power)/220V
2. Rated Power: 300w~700w
3. Lifting Time: 1~3s
4. Weight: 100kg~500kg
5. Operation Method: Wire Control/Remote Control
6. Working Temperature: -40~70°C

Installation

Materials Preparation

1. Cutting machine (for to break road);
2. Excavator with a broken hammer (for to break road);
3. Pressure self-adhesive waterproof tape and insulation tape;
4. C30 concrete;
5. Level ruler(equipment leveling);
6. Cement, brick (for to build wire well); wire well specification:300 * 400 mm; wire well covers;
7. Electric concrete vibrator;
8. Wire trunking, impact drill, drill ($\Phi 6$, $\Phi 12$), $\Phi 8$ expansion screw (for to fix indoor circuit and control box);
9. $\Phi 32$ PVC pipe, PVC T-pipe, straight PVC tube, 45° PVC elbow (As wire protection pipe); $\Phi 110$ PVC pipe, PVC T-pipe, straight PVC tube, 45° PVC elbow (As drain pipe material);
10. 8 * 1.5 cable(8 cores , $\Phi 1.5$ mm line; bollard to wire well);
11. 3 * 2.5 cable(3 cores $\Phi 2.5$ mm line; bollard inside hydraulic ram line from wire well to control box);
12. 2 * 1.5 cable(2 cores, $\Phi 1.5$ mm line; pressure relief line and heat protection line from wire well to control box);
All cable upon are RVV line.

Installation Steps

1. Well prepared, clear the order and location of the various parts of the installation, excavate foundation.





2. According to the site and topographic situation to arrange control lines and set wire well; wire well specification: 300 * 400 mm. Ensure that the construction of trenches without damaging other underground facilities. Determine the tube and cable length (According to situation, wire well is optional).
3. Lay 300mm permeable layer with gravel, permeable layer must be flat, tamping. (If meet the situation that local water level is low, and bottom of foundation has water leakage, need to build drainage system).

Note:

Depth of foundation=Bollard housing height(H)+Concrete thickness(300mm)

Length of foundation=Two ends rising bollards distance(L1)+Concrete thickness(200mm)*2

Width of foundation=Rising bollard width(W1)+Concrete thickness(200mm)*2

Above are recommend dimensions. Can make adjustments according specific site situation.

4. Set ϕ 110mm pipelines as drainage, connects with drainage well, Excavate beside of the equipment and built a drain well(Drainage well depth have to over 2m. If have municipal drainage around, could connect equipment drainage pipe to municipal drainage directly);
5. Pour 300mm depth C30 concrete over drainpipe into the foundation, at each bollard bottom have one T-pipe orifices of the drainpipe, after concrete pouring, stir with electric concrete vibrator. Have to choose C30(Or higher mark concrete) to guarantee the foundation

strength, if customer request, could reinforce steel bar inside foundation concrete. Concrete solidification time is about 24 hours.

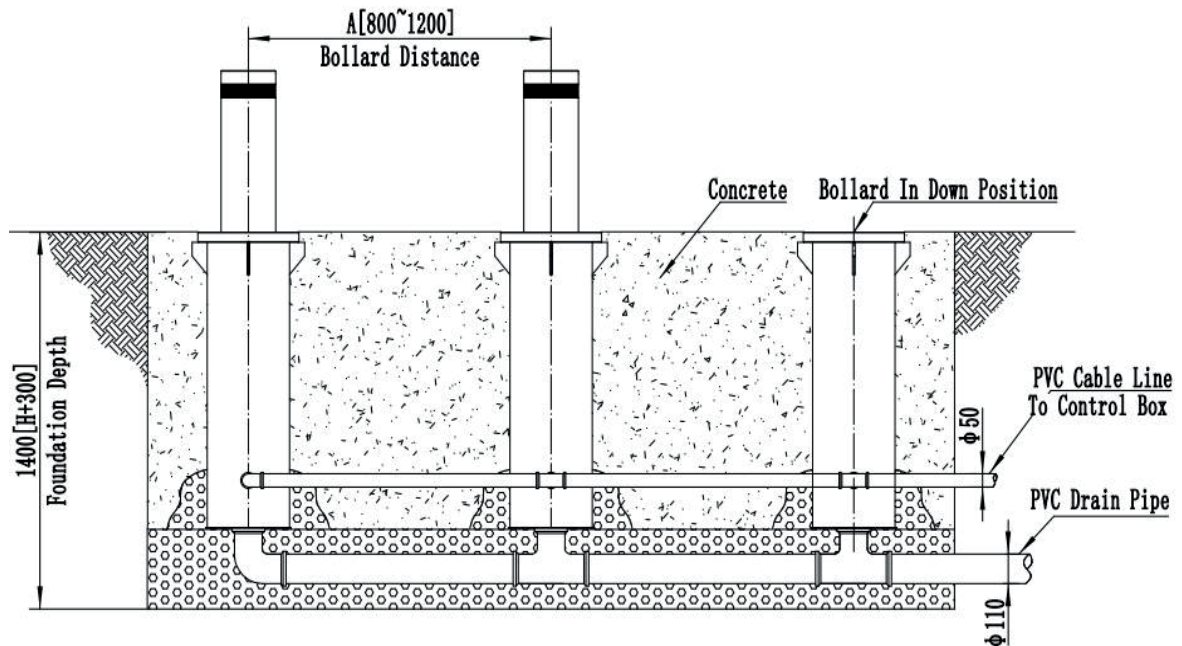
6. Measure the length from the bollard to wire well, set and connect bollard wire.
7. Set bollards horizontally on solid concrete layer, centers of the bollards on a horizontal line, top of rising bollard slightly above road surface (higher about 1-3mm). Make bollards full level with level ruler.



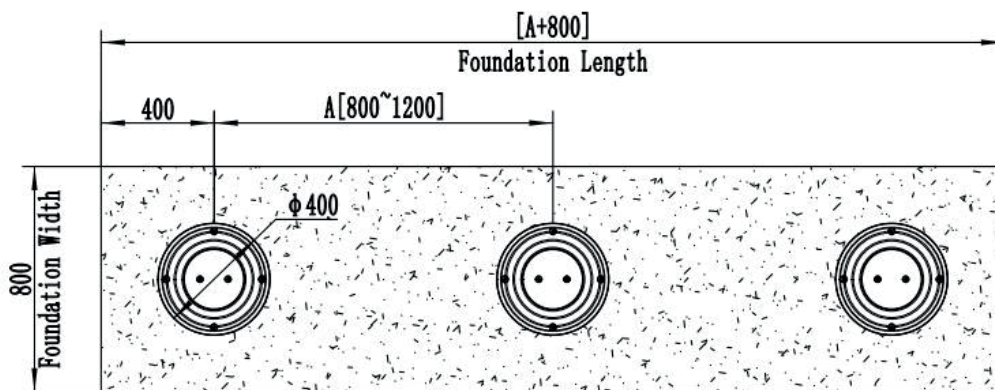
8. Use Φ 75mm PVC pipe, elbow, tee, connect each bollards' wire to wire well.
9. Transparent tape tied wire, stabilize pipe, to prevent broken off pipe when backfilling concrete, also for to prevent concrete leak into pipe.
10. Protect the upper surface of the bollard with tape or foam pad, to prevent concrete leak into bollard, backfilling C30 concrete slowly and evenly, make sure concrete do not rush to bollard and pipe.



11. Install control box according to customer requirement. Connect to wires in well to control box. Do waterproof work with waterproof tape.
12. Connect button box(connection method shown below).
13. According to the scene to restore the area.



LZ15Y Automatic Bollard Installation Drawing



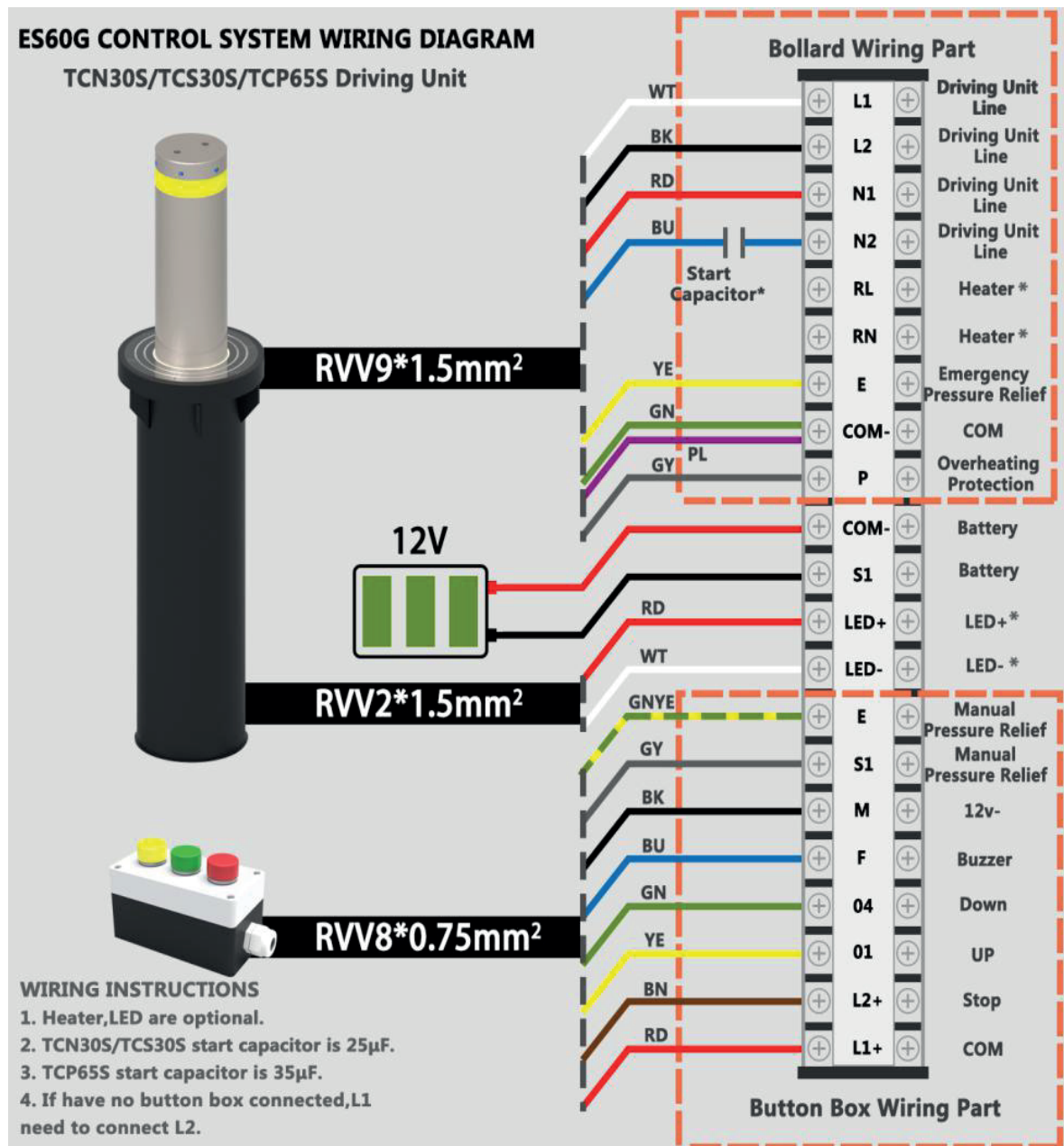
PLAN VIEW

LZ15Y Automatic Bollard Installation Drawing

Circuit Connection

220V Automatic Rising Bollard has 8-core cable out of bollard wall, each core has a color: White, Black, Red, Blue, Yellow, Green, Grey, Purple.

Control system wiring diagram as following show:



Operation

Remote Controller



Switch is on the side of remote control.

Total four buttons on remote controller. A(Up), B(Down), C(Stop), D(Spare Key).

Button Box



Three buttons on button box, Up; Down; Stop.

Up button rise bollards; Down button fall bollard; Stop button stop running bollards.