

User Manual

Automatic Bollard

Applicable Model: BOL1219-A

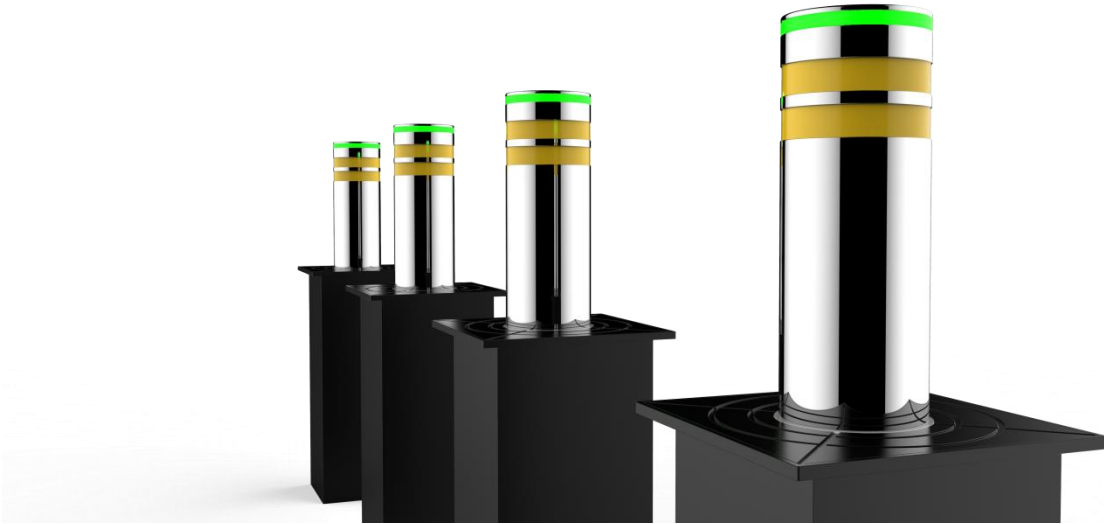
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1. Automatic Bollard Composition

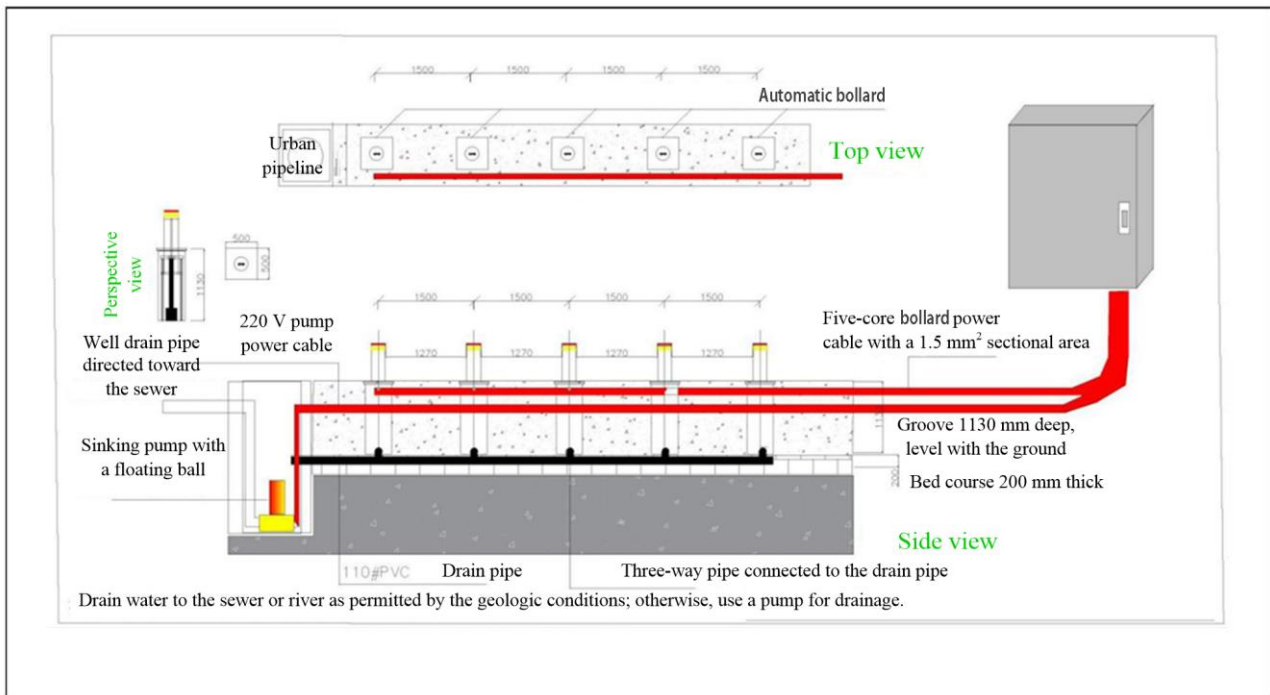


Automatic bollard appearance



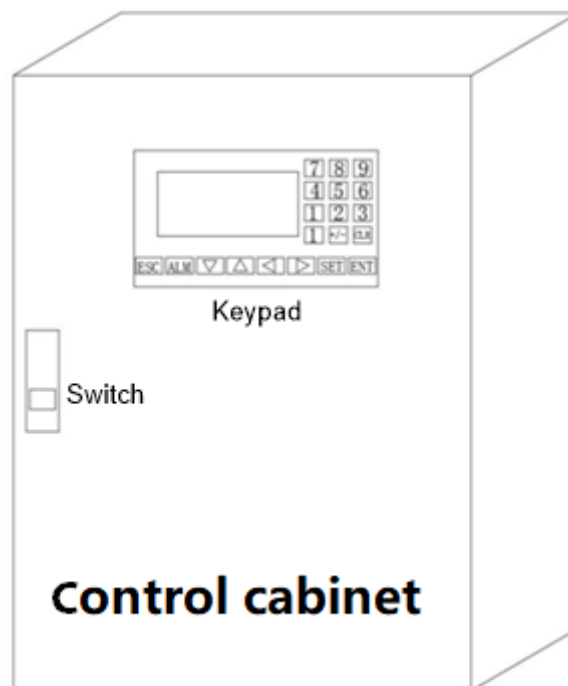
Control cabinet

Engineering and System Diagram

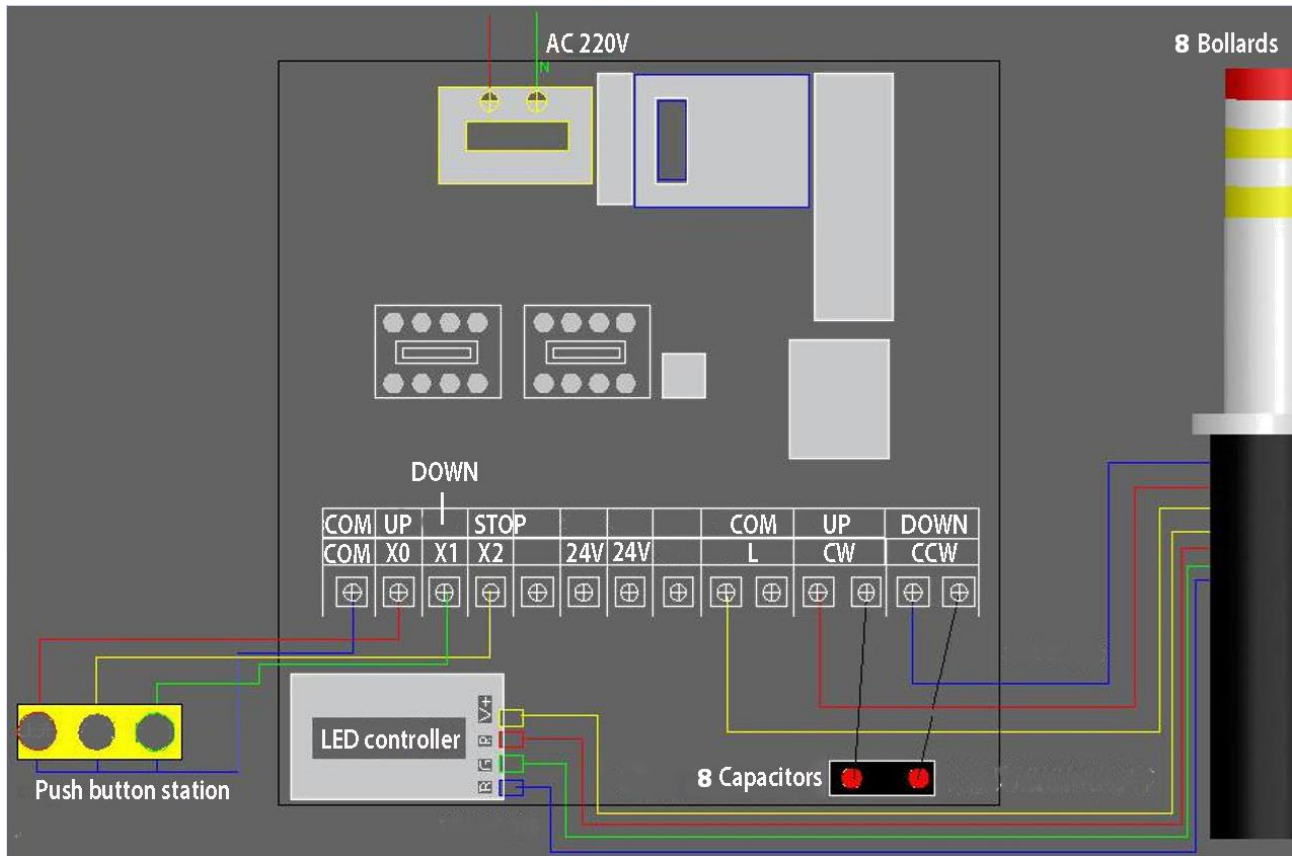


2. Control Cabinet

(1) Appearance



Note that how many bollards there are, how many capacitors should be connected to control cabinet. For example, if there are 8 bollards, you need to connect 8 capacitors to control cabinet.



(2) Keypad Screen



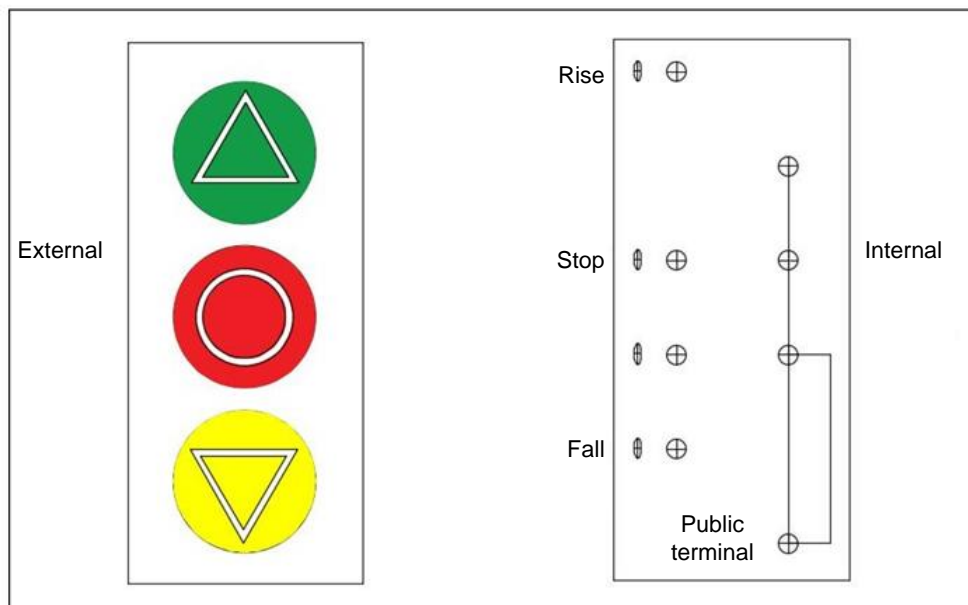
Keypad use instructions:

ESC: Exit; **ALM:** Alarm; **SET:** Set; **ENT:** Enter; **CLR:** Clear.

You can adjust the lifting time by using the keypad. After power-on, press and hold the right arrow key on the operation interface until the rising and falling time is displayed. Then, enter the rising time by using the numeric keypad and press **ENT**; enter the falling time and press **ESC** to exit the time setting screen. The lifting time is set by default or set by onsite technical engineers, and does not need to be modified in normal cases.

You can enter the **Rise**, **Fall**, and **Stop** screens through the keypad. You can control lifting by pressing the up and down keys.

(3) Push Button Station



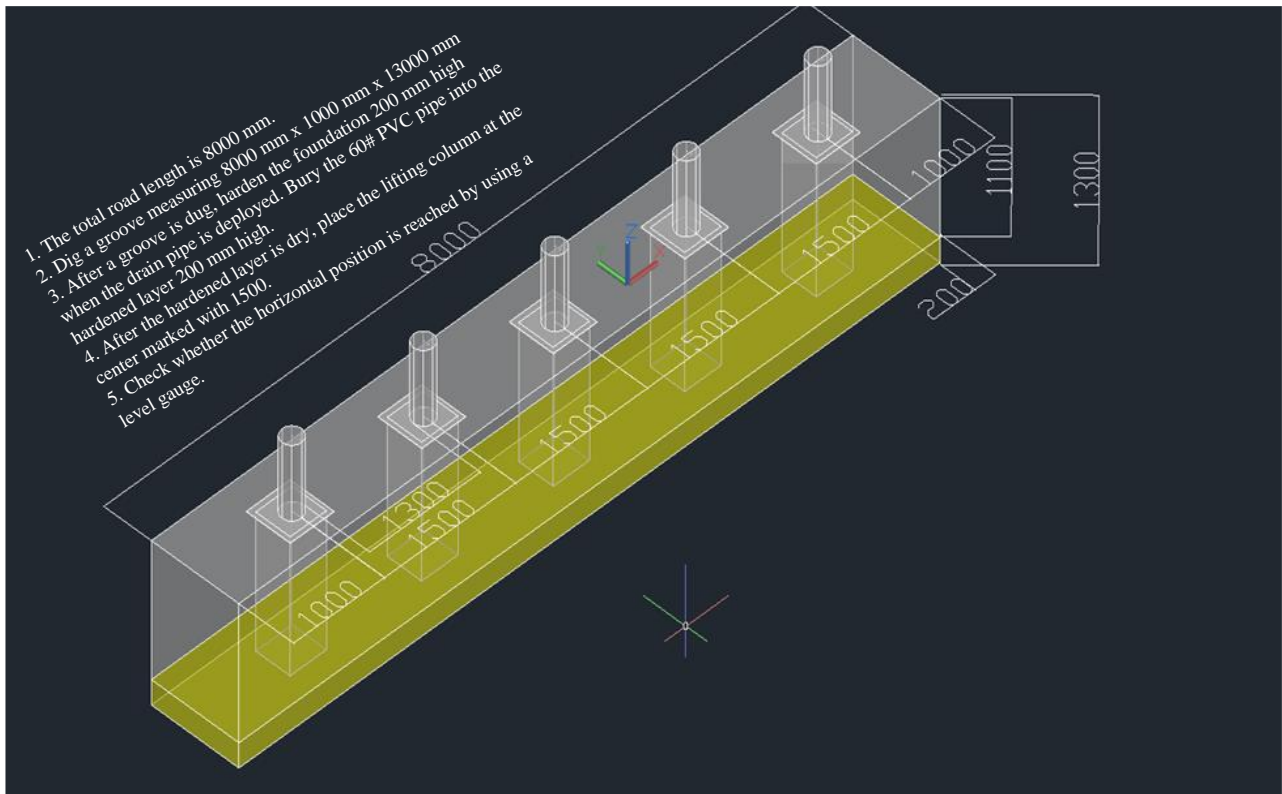
3. Installation and Usage Procedures

① Digging an embedded base

Digging principle: One stake measuring 1000 (W) × 1300 (D) × 1000 (L), two stakes each measuring 1000 (W) × 1300 (D) × {(1000 + 1500) (L)}, and so on. The central spacing of bollards is calculated based on 1500 mm. The grooving length is determined as follows: The total central spacing of all bollards is greater than 1000 mm, and the four walls of the base are flat and vertical to the ground.

Draw the digging area on the ground of the installation site in accordance with the design scheme. If the road surface is made from cement or asphalt, cut on the four sides of the digging area by using a dedicated dicing saw, loosen the road surface by using an electric pick, and install bollards manually or by using a ditcher. Avoid

damaging the ground outside the construction site during digging.



8 m intersection

② Casting a bed course

Cast a concrete bed course 200 mm high at the bottom of the pit. Ensure that after the bollard is placed on the bed course, its ground cover is horizontal to the ground surface.

③ Placing bollards

Lay a horizontal line for bollard installation. Draw a rope horizontal to the ground between two ends in the direction toward the center that is vertical to the base ditch (along pitch length), and draw a rope horizontal to the ground at the center of the installation position of each bollard in the transverse direction (along pitch width), to form crisscross position lines for installation. Tighten each line by driving steel nails at both ends of the line to prevent it from displacing.

Preliminarily test the bollards before placement to check that they are normal.

Place the bollards on the bed course after it is dry. Ensure that the bollard height is the same as that of the upper horizontal line and that the center of the bollard cover is consistent with and vertical to the junction of the central line.

④ Laying pipes

Connect the drainage holes of bollards by using PVC pipes with a diameter of 50 mm, and direct the pipes into sewers or a drainage shaft.

Route RVV9*1.5 electric cables independently for each bollard with lighting or RVV5*1.5 electric cables for each bollard without lighting. Lay the cables inside PVC pipes and connect them to the control box.

⑤ Connecting wires

Fix the control cabinet and turn the air breaker to OFF. Connect a 220 V power supply to AB of the control cabinet by using a two-core wire with a 2.5 mm² sectional area. Connect each bollard motor wire to L (common terminal), CW (rising), and CWW (falling) of the controller.

Connect CW and CWW by using a number of capacitors based on the quantity of bollards controlled by the controller. Connect four light strip wires to the LED controller.

Map COM, X0, X1, and X2 to the common terminal, Rise, Fall, and Stop push button station respectively by using four-core wires with a 1.5 mm² sectional area to test the push button station.

⑥ Automatic bollard commissioning

Turn the air breaker to ON after bollards are installed. Set the rising and falling time on the keypad of the control cabinet. Perform a lifting test to test the handheld wireless remote, push button station, and shelf rising/falling keys. Test the manual falling unit, adjust the bollard to the rising state, and connect two solenoid valves to the storage battery. The bollard is normal if it falls down.

⑦ Tail-in work

Cast concrete into the groove after bollards are tested to be normal. If road bricks need to be restored, reserve an area of 100 mm depth for restoration.

4. Precautions

- (1) **Wiring:** Connect wires securely and take water protection measures.
- (2) **Drainage:** Take drainage measures at the base of an integrated bollard. Take advantage of onsite sewers and streams if any. Otherwise, build a reservoir and use pumps for drainage. Build a permeable layer in areas with few rainfalls.

5. Troubleshooting

- (1) **Trip:** If the controller trips frequently, the line may be damaged or water seeps in. Check the line promptly.
- (2) **Remote:** If the wireless remote malfunctions but the push button station are normal, replace the battery. If the problem persists, the receiver may be faulty. In this case, replace the receiver and perform commissioning.
- (3) **Core:** If a bollard in the rising state falls down, the core may be insufficiently lubricated or damaged. To solve the problem, remove the screws from the bollard panel, lift the internal core, and add hydraulic oil. If the problem persists, contact the manufacturer to replace the core.

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