DS713-IO Electronic Lock Specification

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1 ． Product Introduction

DS713 is a smart cabinet lock developed by our company. The lock shell of this lock is made of zinc alloy and has an IP65 waterproof rating. It can be used indoors and outdoors.

This product should be smaller in size and suitable for small cabinet products currently on the market. The function of this product is IO control as soon as it is powered on. The lock is powered by 3.3V or 12v, press the handle after powering on to unlock.

Unlocking in emergency situations can be divided into mechanical and electronic methods according to needs, and you can choose between the two. The main difference between the two is the equipment management and data recording of unlocking personnel. This electronic lock is widely used in outdoor cabinets, smart light poles, integrated cabinets, unmanned vending machines, smart wide-angle light delivery boxes, public security boxes and other smart city application places.

2 . Technical parameters

	Item	Specification/Condition	
Overall specifications	Model	DS713	
	Overall dimensions	See drawing	
	Panel cutout	103*26.5mm	
	Rated Voltage	DC 12V/3.3V (optional)	
	Operating Voltage	DC 12V/3.3V (optional)	
	Power Consumption	≤3.6W	
	Rated Current	≤0.5A	
	Protection degree	IP65	
	Unlock method	IO control	
	Anti-prying level	RC 4	
	Fire-proof level	UL94-V0	
	Mechanical lock cylinder type	Single pass configuration (001-200) Note: Domestic non-standard	
Part specifications	**Name**	**Material**	**Surface treatment**
	Housing	Zinc Alloy	Black
	Handle	Zinc Alloy	Black
	Press plate	carbon steel	Blue and white zinc
	Name	**Specification**	

Hardware specifications	Hardware platform	32 bitARM Cortex™-M4F
Environmental conditions	**Item**	**Condition**
	working environment	Temperature: -30~70℃ Humidity: 10-90%
	Storage environment	Temperature: -40~80℃ Humidity: 0-90%
	Altitude	-60m-4000m
	Packaging vibration resistance test	After packaging, there was no abnormality after applying 1.1G acceleration + vibration in XYZ three directions for 30 minutes.
	Packaging impact resistance test	After being packed, it is 60 cm high, has 1 corner, 3 sides and 46 faces. It fell naturally without serious damage.

3 . Operating instructions

3.1 IO control unlocking

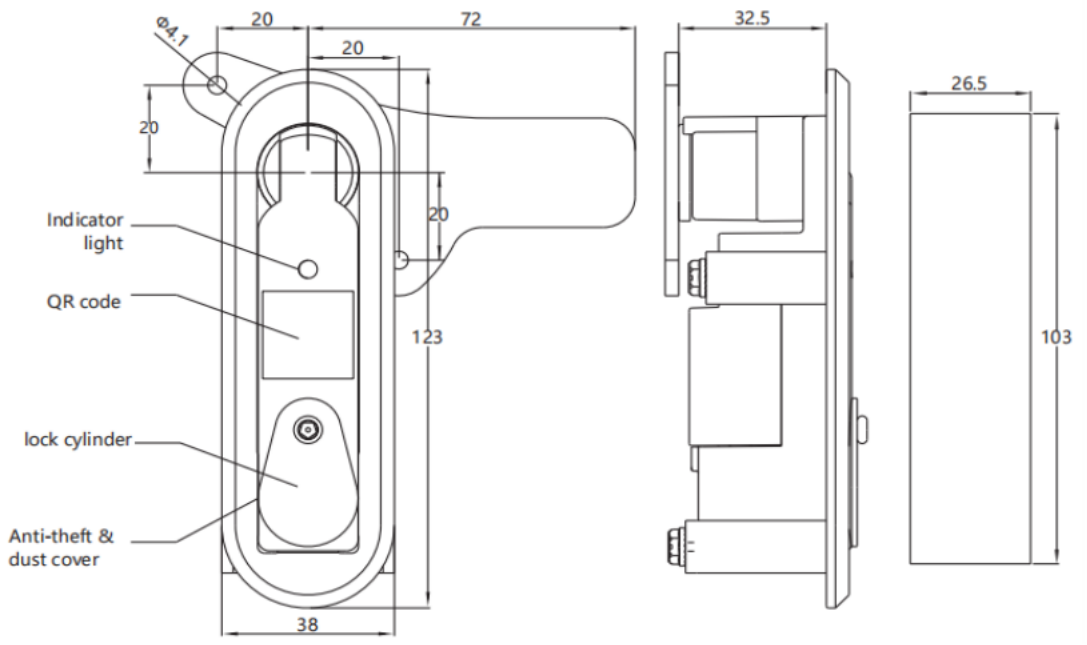
The red wire of the lock is connected to the positive power supply (12v/3.3v), and the black wire is connected to the negative power supply (GND). After powering on, press the handle to trigger the lock to unlock.

3.2Electronic key/mechanical key unlocking

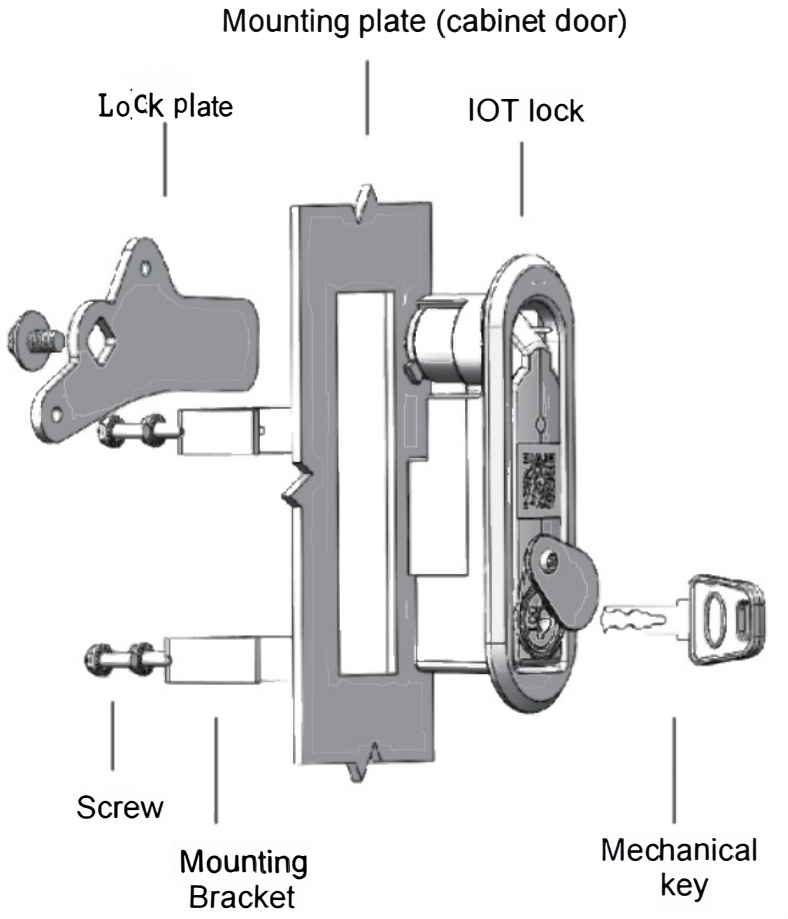
3.2.1 Use a mechanical key to open the mechanical lock cylinder in an emergency and rotate the handle to unlock action;

3.2.2 Using an electronic key to unlock the door requires the operator to have permission to unlock the door. The electronic key is connected to the mobile phone.After the mini program is Bluetooth, click to unlock, align the key with the electronic lock cylinder and hear the beep, then rotate the lock. The core performs the unlocking action.

4 . Dimension diagram



5 . Installation diagram



6 . Wiring diagram

No.	Color	Signal definition
1	Red	+12v/3.3v
2	Black	GND
3	Yellow	Handle status
4	White	LED2
5	Green	LED1
6	Blue	None
7	Brown	Activate button
8	Orange	Buzzer

Matters need attention:

1. When the handle is open, pin 2 and pin 3 are disconnected; when the handle is closed, pin 2 and pin 3 are connected;

2. After the activation button is pressed, pin 2 and pin 7 (GND) are connected;

3. The solenoid valve can be driven by +12V or +3.3V;

4. The buzzers are all passive buzzers and need to be driven by PWM;

5. Both the buzzer and LED are driven by 3.3V-5V.

7 . Packing List

Attachment No.	Attachment description	Unit	Qty	Remark
1	Electronic lock	set	1	
2	Connection line	pair	1	/
3	Anti-thefting key	set	1	
4	Press plate	pair	2	/
5	Lock plate	set	1	optional

Typical application 1

You can use the controller/FSU to control, use the controller to control the unlocking , and display the unlocking, check the status of the handle, wake up the controller, etc. You can also use the electronic (mechanical) key to unlock, and use the WeChat applet to unlock and view the unlocking record.

8. Matters need attention

1、Please do not use it beyond the limited parameter in this specification, otherwise we will not offer any warranty.

2、In case of any changes of the specification specified on this document.A written notice is requested in advance.

3、Please do not wrap the power cord around the lock or pull the power cord hard, otherwise the power cord may be damaged and cause function failure.

4、If any information and documents are different from this document, this document will be taken as the main reference.

5、Please do not use in hazardous environment or any environment with flammable gas .

6 、Please be cautious when handling or installing, it may cause damage if electronic lock fell to the ground.

7、The torque of the screw is not allowed to exceed 3N.m,and the torque of the handle is not allowed to exceed 30N.m.

8 、During the installation, any strike to the lock body is not allowed to avoid damage to the components.Installer should wear gloves.

9、The door must be kept stable during installation, and the cutout of cabinet door must match the lock.

10、Do not strike the lock body by force to prevent the lock from corrosion,please do not use chemical substances to wipe the surface of the lock body.

11 、After installation, the lock body should kept flat and vertical. The lock can reach the waterproof grade of IP65 without coating any waterproof glue.