Q2503 Feeder feeder

Functional logic specification

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	Reviewer	

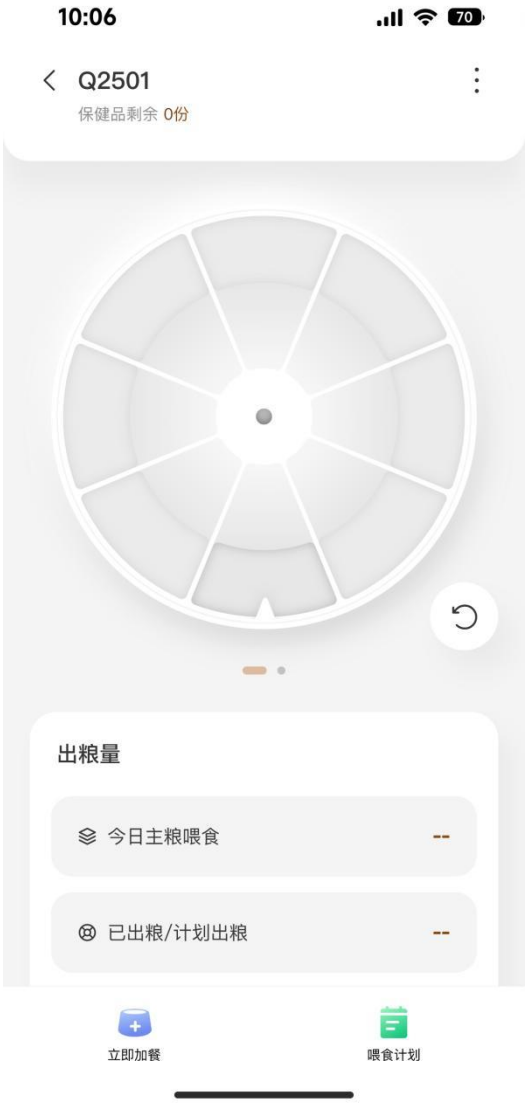
Version Change Record

Version number	Revised content	Revision date	Reviser	Reviewer
V 0.0.0.1	Initial formulation	2025/2/12	Yu Dan	Yu Dan

catalogue

1 Operation interface

1.1 APP interface



1.2 **Panel interface**

2 Function description

2.1 **Pay the grain**

- Press the grain dispensing button briefly once to dispense one portion of grain. Press and hold for continuous grain distribution; release to stop. Press three times in a row to enter the child lock mode

2. 2 **Distribution network**

- Press and hold the distribution network key for 3 seconds to enter the distribution network mode. The blue light will flash. After the distribution network is successful, the blue indicator light will remain on constantly.

2.3 **Manual grain output model**

- Press the machine's grain output button or manually output grain through the APP. The machine will output grain once

2.4 **Planned grain production model**

- After setting the grain output plan on the APP, it is sent to the machine, and the machine outputs grain according to the set grain output plan

2.5 **Residual detection model**

- After setting the grain output mode to the remaining weight detection mode on the APP end, the machine will output grain based on the current remaining weight. That is, when the remaining weight is less than the set value, the machine will start to output grain, and when the remaining weight in the food bowl exceeds the set value, it will stop discharging grain

2.6 AI grain output model

- The camera monitors and recognizes different cats. When a cat approaches the camera, it feeds the cat according to the set plan and records the current feeding plan of the cat.

2.7 Introduce a health supplement model

- Configure the health product distribution plan through the app
- Initialize the delivery time of health products through the APP
- By default, once the lid of the health product warehouse is opened (Hall detection), it is judged that the health product grain release has been restarted. By default, health products are released once every 24 hours, for a total of seven times

2.8 Low power model

- When an external power outage of the machine is detected and the power supply is battery-powered, it enters a low-power mode. At this time, only basic functions are retained, the camera module stops working, and the load cell and indicator light enter a low-power mode to operate

2.9 Food shortage reminder

- When the infrared sensor detects that the grain storage silo is short of grain, it will issue a reminder of insufficient remaining quantity, and the corresponding indicator light on the interface will flash. After the health supplements are distributed as planned for 6 portions, a reminder of insufficient health supplements will be issued, and the red indicator light will remain on constantly

2.10 Motor locked rotor

- If the grain-discharging motor detects that the current exceeds the set value or no photoelectric signal is detected for a long time, it is judged as a blocked rotor. After the motor rotates in reverse and then in the forward direction, if there are three consecutive abnormal situations, it is judged as a grain jam and blocked rotor, and the red indicator light on the interface will flash

- If the photoelectric signal of the motor in the health care chamber is not detected for a long time, it is judged as blocked rotation. After the motor rotates in reverse, it rotates in the forward direction. If it is abnormal for three consecutive times, it is judged as blocked rotation due to food jam, and the red indicator light on the interface will flash

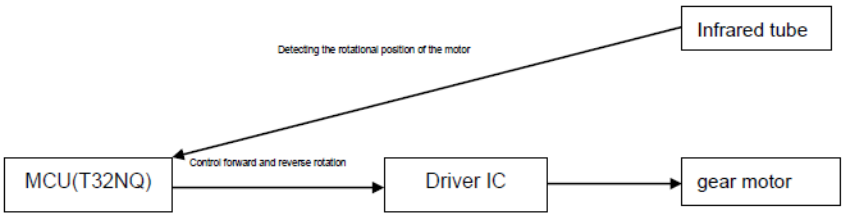
2.11 APP operation

- Different grain output modes and plans can be set

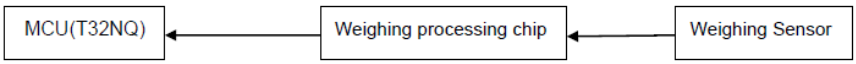
- A health supplement plan can be set up
- You can view the daily/weekly/monthly/annual grain output log
- You can send a reminder about food shortage
- You can check the dietary conditions of different cats
- Remote voice recording and video recording are available
- ota upgrades, silent upgrades or immediate upgrades are available

3 Load Module Description

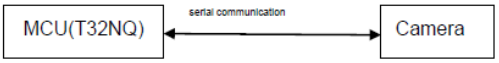
3.1 Pay the grain/Health care product motor



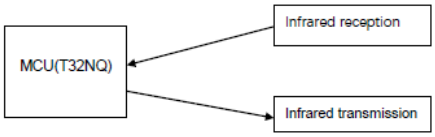
3.2 Weighing System



3.3 Camera System



3.4 Surplus detection



4 Fault description

4.1 The grain discharge motor is blocked

Current value	Duration	Result
Greater than600mA	300ms	Abnormal
Less than400mA	1000ms	Normal

4.2 Abnormal weighing

An abnormality occurs in the communication between the serial port and the weighing main control unit, triggering it.

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• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
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