QOTO

Product Catalog Version 3.0

Specialize on Flow Control via IoT



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QOTO

Company Value

To win honor with sincerity and market with quality

Company Mission

Promote development on IoT flow automation and add value to social advancement

Company Prospect

Rooted in IoT flow control,being the industrial leader and the excellent centre of global market

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Home Garden water timers

About us

Shenzhen Power-Tomorrow Actuator Valve Co.,Ltd, started on 21 , Nov,2017, a high-tech company of IoT flow automation with the nucleus of Internet of thing+smart hardware, has created QOTO smart irrigation system and obtained multiple patents. The smart valves and valve controllers developed by our own for small and medium sized pipelines have been applied in municipal landscaping and agricultural irrigation, meeting different requirements from users and scenarios.After years of accumulations on experience and technology,
QOTO has been the leader of remote control smart motorized valve, pushing forward the developing of IoT flow control and society, wining the honer with sincerity and market with quality. We stick to make contribution to saving water society with high quality products, professional technical solution and high standard before-sales and after-sales services.



Rich experience

We have the best automation product and solution in flow control including detecting pressure, flow rate and liquid level.

Professional team

We own a professional team who is responsible to smart flow control development, production, marketing and after-sales service with professional knowledge to meet clients' all-round requirement.

After-sales service

We have a mature and complete after-sales services to solve the problems and your case in time.

Under the team's persistent endeavor and innovation QOTO has earned dozens of patents, at the same time, The company passed ISO 9001 certification, passed the third-party quality inspection and obtained certificate of CCC,CE,FCC and Rohs.We build up the reputation with honesty and market with quality. Even with years of development, we still try to optimize the company structure portfolio and sustainable development strategy according to market requirement and modern company management system







History

2012

Yueqing Runli automatic co.,ltd was set up and mainly focused on producing and developing traditional electric actuators.

2017

Shenzhen PowerTomorrow Actuator valve co.,ltd was established in Bao An Shenzhen, started to develop oversea market

2018

Establish a research and development team to start in the field of IoT pipeline control and establish the company's long-term strategy in the IoT.

2019

Developed the first smart water valve control by IOT, created a precedent for smart irrigation electric valves, has been expanded certificates with 12 patents.
Set up the sub-company shenzhen Flower protector co.ltd, and launch garden water timer for home garden.

2020

Under the team' s effort, we launched QOTO smart irrigation system, and registered QOTO as Chinese, USA and EU trademark with 16 patents

2021

Multiple smart valve controllers were lanuched to cover DN25-DN500 valve size with 6 patents

2022

The QOTO smart irrigation system is improved via the supplement of high pressure spraying system. The develop team has been expanded to members with 8 patents.

2023

Launched constant current technology and obtained patent certificate. Product upgrades include breakthroughs in functions, hardware and other aspects, increasing investment in R&D, launching more new products (intelligent gate valves, oil valves, new water and fertilizer integrated equipment, etc.), and integrating sensing equipment to achieve automation. The company has passed ISO9001 certification.

Together For A Better Future

Brand advantage

4 FOUR CORE ADVANTAGES



10 years digging deep in IoT flow control

01 Front runner

- 10 years digging deep in IoT flow control
- Make a breakthrough in technological innovation and new product developmentcontinuously

Smart ecological system with software and hardware

02 Smart ecology

- The combination of software and hardware promises a high standard quality
- Systematization intelligence , automation, refinement

Hundreds of domestic and oversea patents

04 Innovative technology

- Years of research and development, obtaining hundreds of patents, we lead the trend of edge technology
- Solve customer’ s sore point precisely, and offer and the high quality user experience

Sophisticated and professional service system

03 Professional service

- All-inclusive before sales and after sales services
- Professional and personalized solutions

Smart valve controller series

QOTO

QOTO: Step into Era of intelligent control with you

5G Motorized valve | DN15-DN500





Smart valve controller series

Product Description

The QT-01EF smart controller valve is equipped with a 1-inch ball valve, and can be equipped with a high-precision flow meter according to needs. There are 3 models, using different power supply methods to cope with different installation environments. 4G, Lora, LoraWAN, and RS485 communication protocols are optional, enabling remote control through mobile APP, computer web, and central console. It has many functions and is easy to operate. Widely used in intelligent irrigation and pipeline control in gardens, plant walls, threedimensional greening, agricultural planting, etc.



Product parameters

Model	QT-01EF-GA	QT-01EF-GB	QT-01EF-RC
Power supply	Lithium sub-battery	Lithium battery + solar energy	External power supply
Communi cation method	4G	4G	Rs485
Protection level	IP67	IP67	IP67
Valve size	DN25	DN25	DN25
Flow meter	Ultrasonic flow meter (optional)	Ultrasonic flow meter (optional)	Ultrasonic flow meter (optional)
Ambient temperature	-20~70℃	-20~70℃	-20~70℃
Medium temperature	0~70℃	0~70℃	0~70℃

Features

1.Remote control via mobile phone or computer
2. Powered by solar panel + lithium battery/lithium sub-battery, the maximum standby time can be up to 5 years.
3. The operation control functions are relatively more comprehensive to meet different irrigation needs.①. Single control; ②.Duration control; ③.Capacity control;④.Cycle control; ⑤ Timed control.
4. Control the valve opening percentage, that is, the valve opening
5. Optional flow meter, using high-precision ultrasonic flow meter
6. After connecting to the flow meter, you can set the flow rate for watering and control the water consumption for irrigation.
7. Fault alarm, pipeline water shortage alarm (after connecting the flow meter), low battery alarm and other functions, making it more secure to use.
8. When watering is turned on, the valve status, watering volume (after connecting to the flow meter) and usage time are fed back to the mobile phone in real time
9. Real-time mode, power-saving mode, and sleep mode. In real-time mode, it can send and receive commands quickly, and in power-saving mode, the standby time is longer.
10. Timing function, access background tasks before starting the timing, and give priority to background tasks. For example: a rain sensor is connected, and a task is set to prevent the valve from starting when it rains. lf the task is accessed in the background before the scheduled start, the scheduled task will not start when it rains.
11.Manual magnetic switch function 12. Device message push
13.Polling irrigation function, multiple de vic es can be queued for irrigation in sequence
14. Historical records, use the log function to record monthly and each water consumption and duration 15.4G, Lora, Lora WAN, and RS485 communication protocols are optional.
16. Personnel management function, setting up sub-accounts and allocating management equipment
17.intelligent linkage function 18.Sianal strength indication
19. Zero pressure switching valve, and the switching valve will not cause water hammer .reducing damage to valves, pipes and nozzles.









Smart valve controller series

Product Description

The QT-12EF smart controller valve has diameters ranging from DN32 to DN65 and is used in a variety of pipeline control fields. It can be equipped with a high-precision flow meter according to needs. The two models use different power supply methods to cope with different installation environments. 4G, Lora, LoraWAN, and RS485 communication protocols are optional, enabling remote control through mobile APP, computer web, and central console. It has many functions and is easy to operate. Widely used in landscaping, agricultural irrigation, greenhouses and other intelligent irrigation and pipeline control.



Product parameters

Model	QT-12EF-GA	QT-12EF-GB
Power supply	Lithium battery + solar energy	Lithium battery + super capacitor + solar energy
Communication method	4G/LoRawan	
Protection level	IP67	
Valve size	Ball valve DN32-DN50; Butterfly valve DN32-DN65	
Flow meter	Ultrasonic flow meter (optional)	
Ambient temperature	-20~70℃	
Medium temperature	0~70℃	

Features

1. Mobile APP or computer remote control, easier to install and use
2. Manual magnetic control operation function, the valve switch can be operated by magnetic control button
3. Manual rocker function, the equipment can use the rocker to manually switch the valve
4. Powered by solar panel + lithium battery/lithium sub-battery, the standby time of power saving mode can reach l year when there is no sun.
5. Real-time mode, power-saving mode, and sleep mode. In real-time mode, it can send and receive commands quickly, and in power-saving mode, the standby time is longer.
6. The operation control functions are relatively more comprehensive to meet different irrigation needs: ①. Single control; ②.Duration control; ③.Capacity control; ④.Cycle control; ⑤ Timed control.
7. Polling irrigation function, multiple devices can be queued for irrigation in sequence.
8. Group control function, single/duration/capacity group control of multiple devices, making it convenient for multiple devices to be used at the same time.
9. Fault warning, pipeline water shortage warning (after connecting to the flow meter), low battery warning and other functions, making use more secure
10. When watering is started, the valve status is fed back to the mobile phone or computer in real time, and the valve switching status can be known without the need for on-site inspection.
11. intelligent linkage function, which can be linked with other intelligent equipment to realize automated irrigation.
12. Control the valve opening percentage, that is, the valve opening
13. Personnel management function, setting up sub-accounts and allocating management equipment
14. Historical records, use the log function to record monthly and each water consumption and duration
15. Can be connected to external pressure sensors, temperature sensors, and flow meters.
16. Signal strength indication 17. Zero pressure switching valve
18. Protection grade lP67, can be installed and used outdoors.
19. switching the valve on and off will not cause water hammer, reducing damage to valves. pipes and nozzles.
20. The controller adopts standard mounting screw hole positions, which is suitable for most valves on the market and facilitates valve replacement and maintenance.
21. Full diameter, not easy to block the valve, long service life.

Remote control | Ultra low power consumption | Accurate flow | Manual magnetic control | Energy saving | Timing control | Task programming | Intelligent linkage | Real time feedback



Butterfly valve



Emergency manual switch valve



Magnetic controlled manual switch valve

Smart valve controller series

Product description

The QT-12HF-G smart valve controller has a diameter ranging from DN32 to DN65 and is used in a variety of pipeline control applications. High accuracy flow meters can be chosen based on requirements. The two versions use different power supply methods to meet the installation needs in various environments. 4G ,Lora, LoRaWAN and RS485 communication protocols are available. The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



Product parameters

Model	QT-12HF-GA	QT-12HF-GB
Power Supply	Lithium battery + Solar panel	Li-SOCl2 Battery + super capacitor + solar panel
Communication protocol	4G/LoRaWAN	
Protection Level	IP67	
Valve size	Ball valve DN32-DN50; Butterfly valve DN32-DN65	
Flow meters	Ultrasonic flow meter (optional)	
Environment temperature	-20~70℃	
Medium temperature	0~70℃	

Features

1.Mobile App and web remote control, easy installation without PLC unit.
2. Manual magnetic control operation function, which can operate valve switches through magnetic control buttons.
3. Manual joystick function, the device can use the joystick to manually open and close the valve.
4. Solar panel+lithium battery / Li-SOCl2 Battery power supply. It has a power-saving mode that allows it to remain on standby for up to 1 year without sunshine.
5. Real time mode, power-saving mode, and sleep mode available. Commands are issued and received rapidly in real-time mode, but the standby period is longer in power-saving mode.
6. Comprehensive functions to meet different irrigation requirements: ①. Single control; ②.Duration control; ③.Capacity control;④.Cycle control; ⑤ Timed control.
7. Polling irrigation, multiple valves irrigate in sequence.
8. Group control, for multiple valves to execute single/duration/capacity control task at the same time.
9. Safe operation with fault warning, water shortage warning(with flow meter), low power warning, etc.
10. Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working.
11. Intelligent interaction, realize automatic irrigation with other smart devices.
12. Percentage to control valve ratio.
13. Personnel management, sub-accounts and assigning devices.
14. Historical recording: promptly record monthly and individual water consumption by utilizing the log function.
15. Can be connected to external pressure sensors, temperature sensors, and flow meters.
16. Signal strength indicate. 17. Open and close the valve without pressure.
18. IP67 protection level for outdoor application.
19. Less water hammer and damage to valves, pipes and sprinklers.
20. With standard installation hole size, the controller is applicable for regular valves in the market, better for later replacement and maintenance.
21. Full valve port size with long life time and less blockage

Remote control | Ultra low power consumption | Accurate flow | Manual magnetic control | Energy saving | Timing control | Task programming | Intelligent linkage | Real time feedback



Ball valve



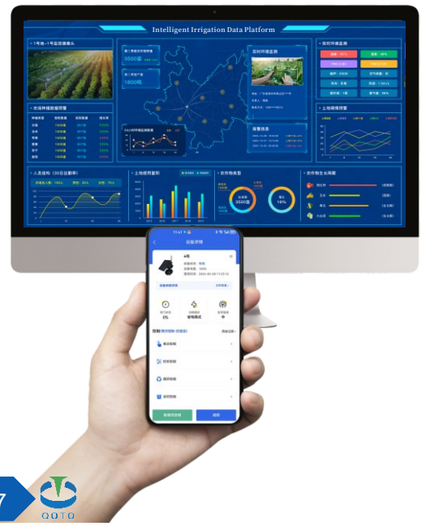
Butterfly valve



Magnetically controlled manual on/off valve.



Smart valve controller series



Easy operation widely application

1.Intelligent operation, mobile App and web remote control, fast and convenient
2.Solar panel+ lithium battery/lithium sub-battery for long-term standby time. Installation with no electric cable, save more labor cos, External power supply port.
3.Combine data collected from weather stations, rain sensors, and soil moisture, and set up automated irrigation based on the data
4.Regulate the valve ratio to reduce water hammer damage.
5.Various control modes for various applications
6.Group control, polling irrigation for batch control
7.Installation without valve well, valve box and electric cable, no need PLC unit.
8.Real time feedback for valve status , various applications on agriculture, plantation, vegetable field, municipal landscape, vertical plant wall, pipeline control

QOTO

1 **Smart control**

Remote control by mobile APP/computer

2 **Precision irrigation**

Precise water consumption control

3 **Auto control**

Big data automated managemen

4 **Wide adaptability**

Suitable for various pipe diameters, optimal valve control for smart irrigation



Smart valve controller series

Product description

QT-02F10/15/20 are three smart controller valves with different torque sizes, matching more large-diameter valves. High-precision flow meters can be selected according to needs to cope with different installation environments. 4G, Lora, LoraWAN, and RS485 communication protocols are optional, enabling remote control through mobile APP, computer web, and central console. It has many functions and is easy to operate. It is widely used in landscaping, agricultural irrigation, greenhouses and other intelligent irrigation and pipeline control.



Product parameters

Model	QT-02F10-G	QT-02F15-G	QT-02F20-G
Power supply	Lithium battery + solar energy	Lithium battery + solar energy	Lithium battery + solar energy
Communicgtion method	4G	4G	4G
Torque	100N.m	150N.m	200N.m
Protection level	IP67	IP67	IP67
Maximum valve diameter	DN125	DN150	DN200
Flow meter	Ultrasonic flow meter (optional)	Ultrasonic flow meter (optional)	Ultrasonic flow meter (optional)
Ambient temperature	-20~70℃	-20~70℃	-20~70℃
Medium temperature	0~70℃	0~70℃	0~70℃

Features

1. Mobile APP or computer remote control, easier to install and use
2. Manual magnetic control operation function, the valve switch can be operated by magnetic control button
3. Manual rocker function, the equipment can use the rocker to manually switch the valve
4. Powered by solar panel + lithium battery/lithium sub-battery, the standby time of power saving mode can reach 1 year when there is no sun.
5. Real-time mode, power-saving mode, and sleep mode. In real-time mode, it can send and receive commands quickly, and in power-saving mode, the standby time is longer.
6. The operation control functions are relatively more comprehensive to meet different irrigation needs: ① Single control ② Duration control ③ Capacity control ④ Cycle control ⑤ Timing control
7. Polling irrigation function, multiple devices can be queued for irrigation in sequence.
8. Group control function, single/duration/capacity group control of multiple devices, making it convenient for multiple devices to be used at the same time.
9. Fault warning, pipeline water shortage warning (after connecting to the flow meter), low battery warning and other functions, making use more secure
10. When watering is started, the valve status is fed back to the mobile phone or computer in real time, and the valve switching status can be known without the need for on-site inspection.
11. Intelligent linkage function, which can be linked with other intelligent equipment to realize automated irrigation.
12. Control the valve opening percentage, that is, the valve opening
13. Personnel management function, setting up sub-accounts and allocating management equipment
14. Historical records, use the log function to record monthly and each water consumption and duration
15. Can be connected to external pressure sensors, temperature sensors, and flow meters.
16. Signal strength indication 17. Zero pressure switching valve
17. Protection grade IP67, can be installed and used outdoors.
18. Switching the valve on and off will not cause water hammer,

Remote control | Ultra low power consumption | Accurate flow | Manual magnetic control | Energy saving | Timing control | Task programming | Intelligent linkage | Real time feedback



Ball Valve



Emergency manual switch valve



Magnetic controlled manual switch valve

Smart valve controller series

Product description

QT-02F smart valve controller , with diameters ranging from DN32 to DN100, is used in various pipeline control fields. It can be equipped with flow meters according to needs, solar energy+lithium battery power supply, and does not require external wires. 4G and Lora communication protocols are available. The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



Product parameters

Model	QT-02F-G	QT-02F-L
Power Supply	DC 5V-30V（Solar panel+18650 batteries)	
Communication protocol	4G	LoRaWAN
Protection Level	IP66	
Valve size	Ball valve DN32-DN80; Butterfly valve DN50-DN100	
Flow meters	Turbine flow meter (optional)	
Environment temperature	-20~70℃	
Medium temperature	0~70℃	

Features

1.Mobile App and web remote control, easy installation without PLC unit.
2. 8.5W solar panel+batteries as power supply, 25 standby days in continuous cloudy weather.
3.External USB power supply DC5V-30V as backup
4.Air call function, devices respond in time and save more power for longer standby time.
5.Comprehensive functions to meet different irrigation requirements: ①. Single control; ②.Duration control; ③.Capacity control;④.Cycle control; ⑤ Timed control.
6.Polling irrigation, multiple valves irrigate in sequence
7.Group control, for multiple valves to execute single/duration/capacity control task at the same time 8.Safe operation with fault warning, water shortage warning(with flowmeter), low power warning, etc
9.Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working
10.Intelligent interaction, realize automatic irrigation with other smart devices.
11.Percentage to control valve ratio
12.Personnel management, sub-accounts and assigning devices
13.External antenna to promise effective communication in bad signal situation，antenna can be extended long
14.Signal strength indicate 15.Open and close the valve without pressure
16.IP66 protection level for outdoor application
17.LoRa,4G and NB-IoT communication protocols
18.Less water hammer and damage to valves, pipes and sprinklers.
19.Valve controller torque:60Nm. The valve will get heavier and heavier after operation, so the Torque Safety Factor of our valve controller is 2-3 time bigger than valve to make sure long lifetime.
20.With standard installation hole size, the controller is applicable for regular valves in the market, better for later replacement and maintenance.
21.Full valve port size with long life time and less blockage
22.Detachable solar panel design, can be integrated to valve controller, and be separated to install in sunny place.





Battery case
Unique battery case for quick and easy installation.
SIM card slot
4G/NB-iot SIM card



Button
top button manual operation for A,B valves.



Solar panel
Detachable solar panel design, can be integrated to valve controller, and be separated to install in sunny place.



Port
2 pin for power supply(solar panel and USB power supply)
4 pin for external flowmeter.

Smart valve controller series

Product description

QT-02ET Smart three ways valve, A valve open, B valve open, all close design, realize flow control from two direction to cover bigger irrigation area and save more cost. The two versions use different power supply methods to meet the installation needs in various environments. 4G, LoRa, LoRaWAN, RS485 communication protocols are available. The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



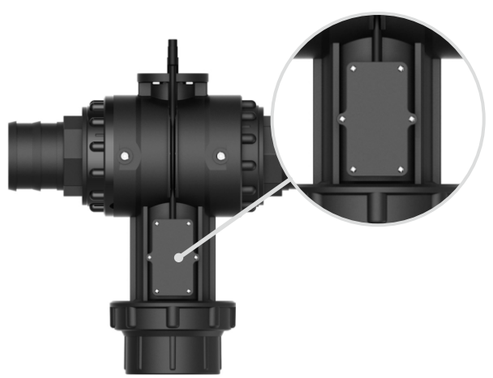
Product parameters

Model	QT-12ET-GA	QT-12ET-GB
Power Supply	Lithium battery + Solar panel	Li-SOCl2 Battery + super capacitor + solar panel
Communication protocol	4G/LoRaWAN	
Protection Level	IP67	
three ways Valve size	DN80	
three ways Valve size	Ultrasonic flow meter (optional)	
Environment temperature	-20~80℃	
Medium temperature	0~70℃	

Features

1. Mobile App and web remote control, easy installation without PLC unit.
2. Manual magnetic control operation function, which can operate valve switches through magnetic control buttons.
3. Manual joystick function, the device can use the joystick to manually open and close the valve.
4. Solar panel+lithium battery / Li-SOCl2 Battery power supply. Working environment temperature -20~70 ℃.
5. Long standby time. It has a power-saving mode that allows it to remain on standby for up to 1 year without sunshine.
6. Low power mode and real-time mode can be selected on the platform.
7. Left open, right open, all close design, realize flow control from two direction to cover bigger irrigation area and save more cost.
8. Control the percentage of valve opening for both left and right openings, known as the valve opening degree.
9. Comprehensive functions to meet different irrigation requirements: ①. Single control; ②.Duration control; ③.Capacity control;④.Timed control.
10. Uneven irrigation is resolved by constant current technology, which uses PID closed-loop control to progressively approach the goal value algorithm.
11. Polling irrigation, multiple valves irrigate in sequence.
12. Group control, for multiple valves to execute single/duration/capacity control task at the same time.
13. Fault warning, pipeline water shortage warning, low power warning, solar charging display and other functions make use more reassuring.
14. Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working.
15. Intelligent interaction, realize automatic irrigation with other smart devices.
16.Personnel management, sub-accounts and assigning devices.
17. Can be connected to external pressure sensors, temperature sensors, and flow meters.
18. Signal strength indicate. 19. Open and close the valve without pressure.
20. IP67 protection level for outdoor application.
21. Less water hammer and damage to valves, pipes and sprinklers.
22. Equipped with fast connectors for quicker valve disassembly and assembly.
23. Full valve port size with long life time and less blockage.

Remote control | Ultra low power consumption | Accurate flow | Manual magnetic control | Energy saving | Timing control | Task programming | Intelligent linkage | Real time feedback



Ultrasonic flowmeter



Quick connector for three-way valve

Smart valve controller series

Product description

QT-02T Smart three ways valve, A valve open, B valve open, all close design, realize flow control from two direction to cover bigger irrigation area and save more cost. 4G and LoRa communication protocols are available.The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



Product parameters

Model	QT-02T-G	QT-02T-L
Power Supply	DC 5V-30V（Solar panel+18650 batteries）	
Communication protocol	4G	LoRaWAN
Protection Level	IP66	
Valve size	Ball valve: DN32-DN80; Butterfly valve DN50-DN100	
Flow meters	Turbine flow meter (optional)	
Environment temperature	-20~70℃	
Medium temperature	0~70℃	

Features

1.Mobile App and web remote control, easy installation without PLC unit.
2.8.5W solar panel+batteries as power supply, 25 standby days in continuous cloudy weather.
3.External USB power supply DC5V-30V as backup
4.Air call function, devices respond in time and save more power for longer standby time.
5.A valve open, B valve open, all close design, realize flow control from two direction to cover bigger irrigation area and save more cost.
6. Control the percentage of valve opening for A and B, i.e. the valve opening degree.
7. Comprehensive functions to meet different irrigation requirements: ①. Single control, ②.Duration control,③.Capacity control, ④ Timed control.
8.Safe operation with fault warning, water shortage warning(with flowmeter), low power warning, etc
9.Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working.
10.Intelligent interaction, realize automatic irrigation with other smart devices.
11. Reserve interfaces for flow meters and pressure gauges, connect to flow meters, control irrigation water consumption, and record and calculate water consumption.
12.Personnel management, sub-accounts and assigning devices.
13.External antenna to promise effective communication in bad signal situation，antenna can be extended long.
14.The solar panel can be designed in a split type, which can be integrated with the controller or installed in a location where it is easier to obtain light.
15.Unique battery compartment design,convenient for battery replacement and maintenance.
16.Signal strength indicate. 17.Open and close the valve without pressure. 18.IP67 protection level for outdoor application. 19.LoRa and 4G communication protocols are available.
20.Less water hammer and damage to valves, pipes and sprinklers.
21.Valve controller torque:60Nm. The valve will get heavier and heavier after operation, so the Torque Safety Factor of our valve controller is 2-3 time bigger than valve to make sure long lifetime.
22. With standard installation hole size, better for later installation,replacement and maintenance.
23.Full valve port size with long life time and less blockage.

Remote control | Ultra low power consumption | Accurate flow | Timing control | Task programming | Intelligent linkage | Real time feedback



Battery case
Unique battery case for quick and easy installation.
SIM card slot
4G/NB-iot SIM card



Button
top button,manual operation for A,B valves.



Solar panel
Detachable solar panel design, can be integrated to valve controller, and be separated to install in sunny place.



Port2 pin for power supply(solar panel and USB power supply)
4 pin for external flowmeter.

Smart valve controller series

Product description

Five smart valve controller models, including QT-10F, have different torque sizes and are compatible with diameters ranging from DN50-DN300,they are used in various pipeline control fields. It can be equipped with flow meters according to needs, solar energy+lithium battery power supply, and does not require external wires. 4G ,Lora and RS485 communication protocols are available. The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



Features

1.Mobile App and web remote control, easy installation without PLC unit.
2. Comprehensive functions to meet different irrigation requirements: ①. Single control; ②.Duration control; ③.Capacity control;④.Cycle control; ⑤ Timed control.
3. With standard installation hole size, better for later installation,replacement and maintenance.
4. Set the flow rate for watering (a flow meter is required) and control the amount of water utilized in irrigation.
5.Safe operation with fault warning, water shortage warning(with flowmeter), low power warning, etc
6.Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working.
7.Control the percentage of valve opening , i.e. the valve opening degree.
8. Timed control.
9. Cycle irrigation
10. Device notification.
11.Polling irrigation.
12.Water consumption and duration record.
13.Intelligent interaction 14.LoRa,4G and NB-IoT communication protocols for options.
15.Device sharing 16.Open and close the valve without pressure
17.Signal strength indicate
18.Intelligent interaction, realize automatic irrigation with other smart devices.
19.Flowmeter and pressure gauge connectors are reserved. Flowmeter for capacity control and consumption Statistics.
20.Personnel management, sub-accounts and assigning devices
21.External antenna to promise effective communication in bad signal situation, antenna can be extended long.
22.Bigger torque, applicable for bigger valve size.
23.Full valve port size with long life time and less blockage.

Product parameters

Model	QT-10F-G	QT-15F-G	QT-20F-G	QT-50F-G	QT-100F-G
Power Supply	DC 24 V /3A (Solar panel+Lithium battery pack)				
Communication protocol	4G/LoRawan/RS485				
Torque sizes	100N.m	150N.m	200N.m	500N.m	1000N.m
Supports maximum valve diameter	DN100	DN125	DN150	DN250	DN300
Flowmeters	flowmeter (optional)				
Environment temperature	-10~70℃				
Medium temperature	0~70℃				

Remote control | Ultra low power consumption | Accurate flow | Timing control | Task programming | Intelligent linkage | Real time feedback



PVC ball valve



PVC butterfly valve



Metal ball valve



Metal butterfly valve

Smart valve controller series

Product description

Seven smart valve controller models, including QT-100A, have different torque sizes and are compatible with diameters ranging from DN50-DN500, they are used in various pipeline control fields. It can be equipped with flow meters according to needs, powered by AC220V. LoRa,4G and NB-IoT communication protocols are available. The valve can be remote controlled via mobile App, web and touch-screen HMI with multiple functions and easy operation. Widely used in smart irrigation and pipeline control for landscaping, agricultural irrigation, greenhouses, etc.



Product parameters

Model	QT-10A	QT-15A	QT-20A	QT-50A	QT-100A	QT-200A	QT-220A
Power Supply	AC110V/220V						
Communication protocol	4G/LoRawan/RS485						
Torque sizes	100N.m	150N.m	200N.m	500N.m	1000N.m	2000N.m	2500N.m
Supports maximum valve diameter	DN100	DN125	DN150	DN250	DN300	DN400	DN500
Flowmeters	Flowmeter (optional)						
Environment temperature	-10~70℃						
Medium temperature	0~70℃						

Features

1.Mobile App and web remote control
2.Comprehensive functions to meet different irrigation requirements: ①.Single control ; ②. Duration control; ③.Capacity control ; ④. Cycle control; ⑤. Timed control.
3.With standard installation hole size, the controller is applicable for regular valves in the market, better for later replacement and maintenance.
4.Bigger torque, applicable for bigger valve size
5.Safe operation with fault warning, water shortage warning(with flowmeter) , low power warning, etc
6.Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working
7.Percentage to control valve ratio
8.Timed control
9.Cycle irrigation
10.Device notification
11.Polling irrigation
12.History、user log
13.Intelligent interaction
14.Communication protocol : Lora/NB-IoT/4G
15.Device sharing
16.Open and close the valve without pressure
17.Signal strength indicate
18.Intelligent interaction, realize automatic irrigation with other smart devices.
19.Personnel management, sub-accounts and assigning devices
20.External antenna to promise effective communication in bad signal situation，antenna can be extended long.
21.Full valve port size with long life time and less blockage

Remote control | Ultra low power consumption | Accurate flow | Timing control | Task programming | Intelligent linkage | Real time feedback



PVC ball valve



PVC butterfly valve



Metal ball valve



Metal butterfly valve

Smart valve controller series

Product description

QT-03G smart valve controller,is powered by DC12V power supply or external solar panel, the highest bearing pressure is 15Mpa. LoRa and 4G communication protocols are available.The valve can be remote controlled via mobile App, web and touchscreen HMI with multiple functions and easy operation, applying to automatic high pressure spraying system, agricultural irrigation and IoT flow control etc.



Features

1.Mobile App and web remote control
2.Polling irrigation, irrigating in sequence or work at the same time
3.Safe operation with fault warning
4.Real-time feedback for valve status on mobile app and web, no need to check with person on the scene when valves working
5.Group control
6.Device notification
7.History record and user log
8.Communication protocol:Lora/4G
9.Personnel management, sub-accounts and assigning devices
10.Intelligent interaction
11.Signal strength indicate
12.For high pressure pesticide spraying, work together with converter and pump
13.Working with high pressure valve, the highest bearing pressure is 15Mpa.
14.External power supply or solar panel+ lithium battery.
15.Standard installation hole size, applicable for regular valves in the market.

Product parameters

Model	QT-03G-G	QT-03G-L
Power Supply	DC 12V 2A(Solar+Lithium Battery Pack)	
Communication protocol	4G	LoRawan
Torque sizes	IP67	
Supports maximum valve diameter	DN15-DN20	
Highest bearing pressure	⩽15Mpa	
Environment temperature	-10~70℃	
Medium temperature	0~70℃	

Remote control | Ultra low power consumption | Timing control | Task programming | Intelligent linkage | Real time feedback







Smart valve controller series

Product description

QT-25ZF smart gate valve, DC12V or external solar panel as power supply. The smart gate valve takes LoRa、4G as options, remote controlled via Mobile App, computer web, HMI control panel with multiple function and easy operation. Wide application in canals, smart irrigation system etc.



Product parameters

Model	QT-25ZF-G1C	
Power supply	DC 12V 2A solar panel+li-on battery	
communication protocol	4G	LoRawan
protection level	IP65	
Applicable valve size	500*500,400*400,300*300	
Environment temperature	-10~70℃	
Water temperature	0~70℃	

Features

1.Mobile App and web remote control
2.Solar panel+li-on battery as power supply, no need electricity cable
3.can control gate valve open ratio
4.multiple control mode to meet more requirements: single control, duration control, timed control.
5.Intelligent interaction with other smart device, realize automation
6.standard size: 500*500，400*400，300*300 and etc.
7.History record support to review each open and close valve record

Remote control | Ultra low power consumption | Timing control | Task programming | Intelligent linkage | Real time feedback







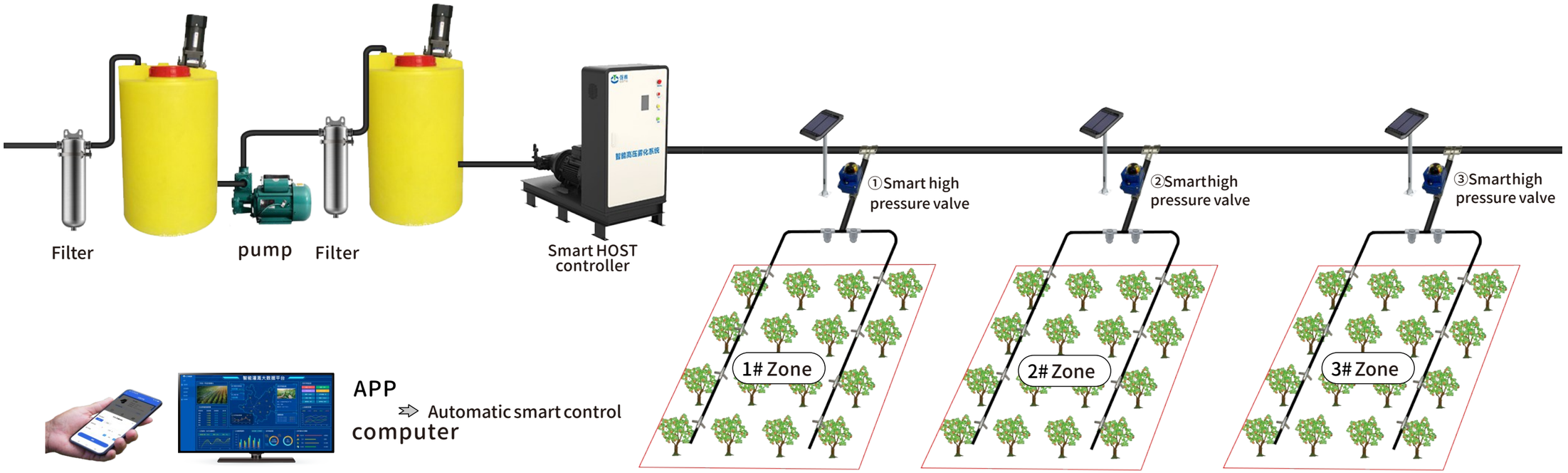












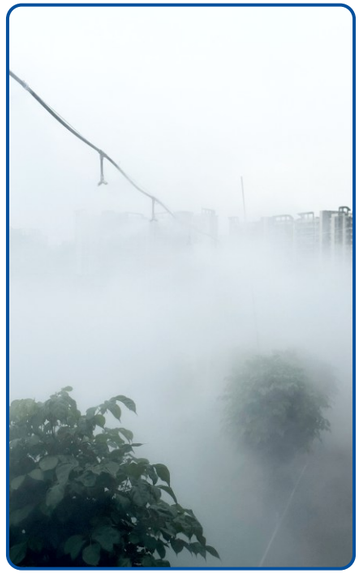
Description

QOTO Smart High-Pressure Atomization System truly achieves fully automatic high-pressure atomization spraying.It is remotely controlled by mobile APP and computer systematically or manually, suitable for spraying pesticides in greenhouses, orchards, vegetable fields, and can also be used for liquid foliar fertilizer spraying, cooling and dust removing, cooling and disinfection in farms, landscapes fogging

QOTO high-pressure atomizing spraying system consists of a smart host computer (high-pressure pump optional), filter, smart high-pressure valve, high-pressure pipeline, high-pressure atomizing nozzle, etc. A real automation is to create spraying tasks, control multiple zones and spraying in line automatically with opening and closing valve manually.

Features

1.The pipe in spraying system can bear pressure of 15Mpa for better atomizing effect and raise pesticide efficiency.
2.Running with pump, different pressure can be set to make sure an even spraying effect.
3.High spraying efficiency. No need people to open and close the valve
4.Reduce more cost on pesticide and manual labor
5.Better spraying effect, helping pesticide land evenly to plants to realize a precise location.
6.Even spraying reduces repetitive splash and decreases damage on crops.
7.Low maintenance cost.







High pressure atomization host



QT-GY01-MP



QT-GY01-NP

Features

1.Mobile phone/computer remote control, local control
2.Create spraying tasks and automate operations
3.Combined with the QOTO valve control system, the valves automatically switch between different area without manual operation
4.Automatically shut down when no water, to ensure the safety of the equipment.
5.Equipped with intelligent frequency converter, the output pressure can be set by APP, different pressure in different areas.
6.Intelligent automated control reduces unnecessary losses such as pipe bursts
7.History record support to review each open and close valve record
8.Equipped with professional high-pressure pump and brass pump head

Fully automatic high-pressure atomization system

The high-pressure atomization host, combined with the QT-03G smart high-pressure valve, forms a fully automatic high-pressure atomization system. This system operates stably, has extremely low failure rate and is easy to maintain. Remote control through mobile APP, computer web, HMI console, etc., with multiple functions and simple operation.

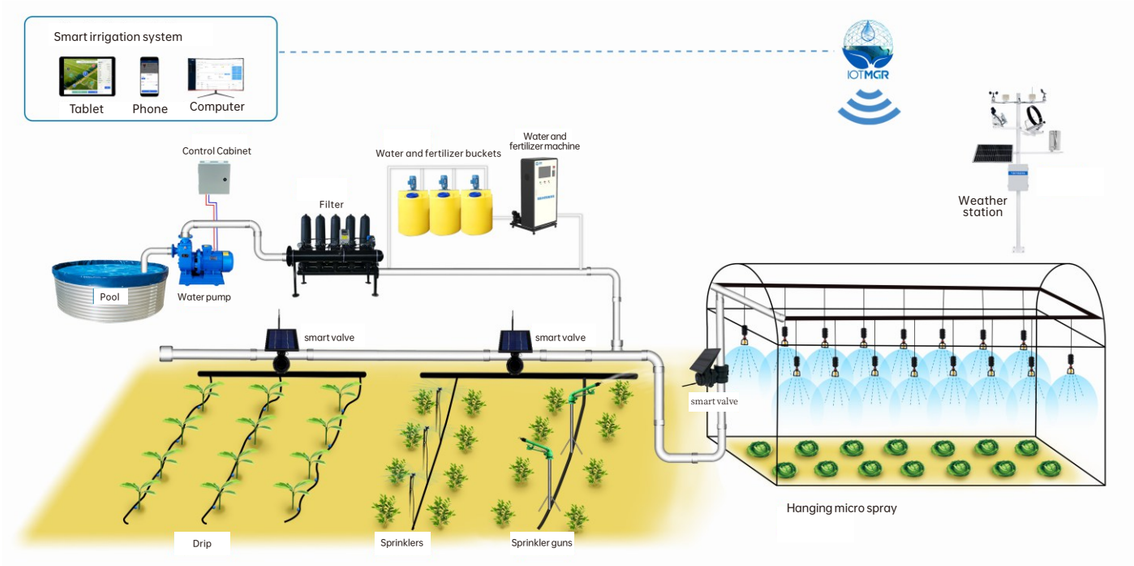


Product parameters

Model	QT-GY01-MP / QT-GY01-NP					
Motor power	3KW	7.5KW	11KW	15KW	22KW	37KW
Inverter power	5.5KW	11KW	15KW	18.5KW	30KW	45KW
Flow rate/min	25L	40L	50L	90L	150L	188L
input voltage	AC220V	AC380V				
communication	4G/LoRawan/RS485					
control panel	Smart control panel (optional)					
air compressor	Blow-cleaning air compressor (optional)					



Fertigation Series



The water and fertilizer integrated irrigation system is composed of water source project, head hub project, delivery pipes
and smart valves. The system is powered by a water pump. The water source reaches the main pipeline after primary and secondary
filtration. The fertilizer are mixed evenly through the integrated machine. Through corresponding calculations, the quantitative water and fertilizer mixture enters the branch pipeline and reaches the drip irrigation belt. The drip irrigation nozzles deliver the mixed water and fertilizer mixture to the roots of the crops, creating the best growth environment for the crops, increasing production and increasing economic benefits.

1.Combining the solar powered valve, it makes up a complete automatic fertilizer and irrigation system
2. Mobile App/ web remote control, local control
3.QOTO water and fertilizer integration combines the constant flow technology of the valve control system to achieve uniform fertilization and irrigation in different areas;
4.Manual and automatic water and fertilizer task control modes can be switched;
5.Inlet water pressure monitoring and alarm functions, fertilization flow setting and monitoring functions
6.Equipped with automatic alarm system. When the equipment fails, the system will automatically stop running.
7.Pipeline flushing and water and fertilizer machine flushing functions.





QOTO



Features

Fertilization channel: single channel
Control mode: App remote control OR Local control
Power: 220V/380V
Smart control screen: 10 inches (optional)
Flushing: pipeline flushing, equipment flushing
System: QOTO water and fertilizer + irrigation system
Fertilization amount : 300L/H-4000L/H

Advantages

1. Water and fertilizer machine combined with an advanced valve control system realize an even fertilization on multiple plots.
2. Suitable for fertilizing large and small areas with longer service life
3. Precise fertilizer dosage control
4.Pipeline flushing and water and fertilizer machine flushing
5.Fertilization data statistics
6.GPS location
7.Fertilizer deficiency alarm
8.Constant current and voltage setting

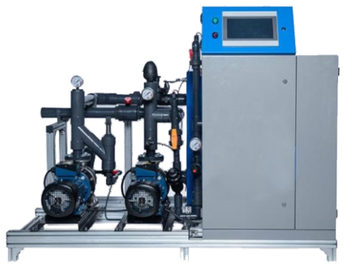


Features

Fertilization channel : 3 channels
Pump power : 2.2KW, 380V
Irrigation zones : 12 extendable zones.
Screen : 10 inch
Control mode : Local control or App remote control
Detection : EC/PH accurate measurement

Advantages

1.Channels, two for fertilizers, one for acid
2.Applicable to: 10000 square meters soilless culture
3. Remote control for easier operation
4.Built-in PID formula, detect and regulate fertilizer concentration and PH value
5.Instant mixture and delivery, reduce occupied area.

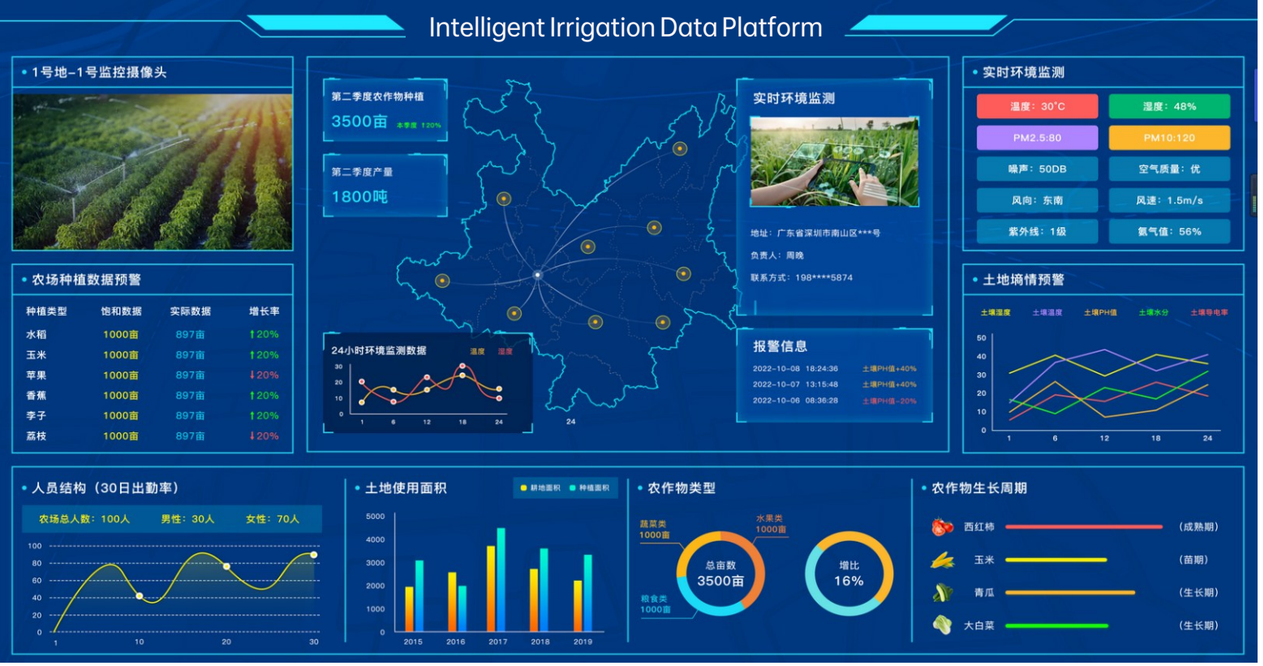


Features

1.Fertilization channel : 5 channels
2.Pump power : 2.2KW, 380V
Irrigation zones : 12 extendable zones.
3.Screen : 10 inch
4.Control mode: Local control or App remote control
5.Detection : EC/PH accurate measurement
6.Flow rate :15m^3/h

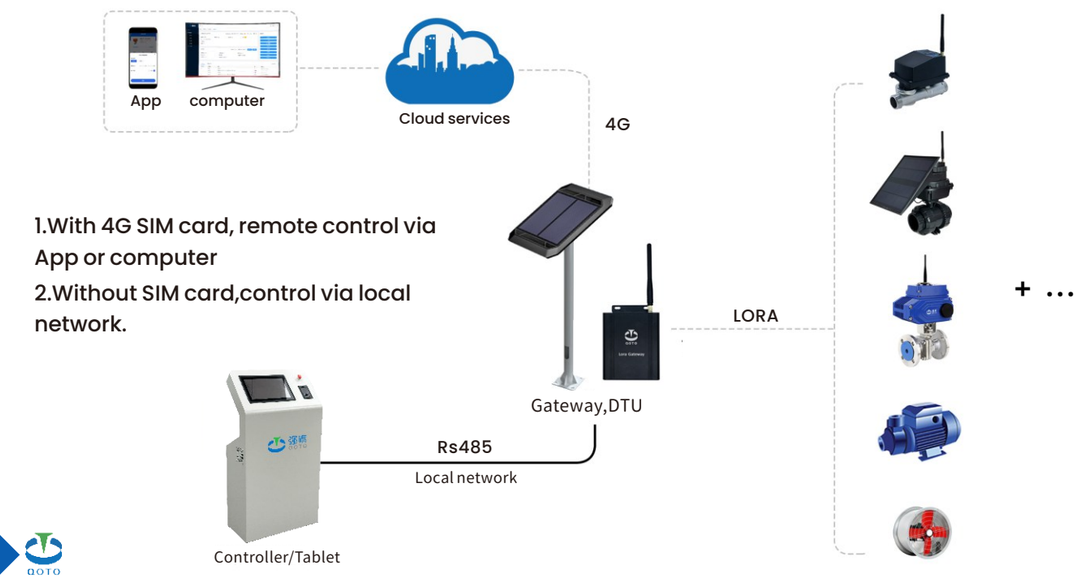
Advantages

1.Channels, four for fertilizers, one for acid
2. Applicable to : 10000 square meters soilless culture.
3. Remote control for easier operation
4. Built-in PID formula, detect and regulate fertilizer concentration and PH value.
5. Instant mixture and delivery, reduce occupied area.



Control system

QOTO smart irrigation system allow users to irrigate via App or computer remote controlling, or via local network. The smart irrigation method changes the traditional experience-based irrigation system. It increases the agricultural watering efficiency and decreases manpower, water waste at the same time, meeting the goal of saving-water irrigation. Starting from the aspects of convenience, cost reduction, and efficiency improvement, it solves the outstanding problems in the promotion of agricultural water-saving irrigation technology, develop efficient water-saving agriculture, comprehensively promotes the transformation of agricultural development methods, boosts agricultural efficiency, and increases farmers' income. Adding IoT technology to growing process, the automatic irrigation system becomes better with the devices like pumps,rotary curtain machine and sensors.





Controller cabinet

Specification
Input : AC100~240V
Screen : 15 inch colored touch screen support Rs485 local network
Working temperature:
-20°C~70°C

Features

Local control/remote control available
Real time display in cloud server,record data from monitoring point, making management visualized
Controllercabinet:control, sensing, communicate



Smart controller cabinet

Main specification
Power supply : DC12V/24V;
AC220V ;AC380V
Protection level : IP65
Communication protocol:
4G、LoraRan
Working temperature:
-20°C~70°C

Features

1.Connect non-smart devices to the system
2.Include DTU, air switch and other accessories, supports custom design
3.Support 4G/RS 485 access platform
4.construction is extremely convenient and can overcome various terrain difficulties.



Solar power gateway/DTU

Specification
Solar panel : 15V 5.8W
Gateway battery : 12V/8000mAh
DTU battery : 12V/2000mAh
(15 days standby in continuous rainy day)
Protection level : IP66
Support Stations : 50 points
Working temperature:
- 20°C~70°C

Features

1.LORA/4G gateway
2.Connect irrigation valve within 2Km
3.Support 4G/RS 485 access platform
4.construction is extremely convenient and can overcome various terrain difficulties.

Weather station/sensing equipment

The smart irrigation system uses the Internet of Things, big data, cloud computing and sensor technology to conduct real-time monitoring of environmental temperature, humidity, light intensity, soil moisture and other parameters in agricultural production. The system analyzes and processes sensor data information to achieve human intervention operation, which is considered as the condition to realize smart irrigation.



Turbine flowmeter

Working with smart valve controller, the external flow meter calculates the water flow via revolving worm gear.
DN25~DN80 Available size: DN25-DN80

Model	Caliber	Flow range
QT-L01-25	DN25	20-280L/min
QT-L01-32	DN32	40-460L/min
QT-L01-40	DN40	50-750L/min
QT-L01-50	DN50	60-1160L/min
QT-L01-65	DN65	80-1980L/min
QT-L01-80	DN80	100-3000L/min



All-in-one weather and environment sensor

Specification
DC power supply : 12/24V DC
Supported protocols: Modbus-RTU protocol and ASCII protocol based on RS485, and SDI-12 protocol
Customizable : 2-in-1; 5-in-1; 7-in-1; 10-in-1, etc
Main measurements:
Wind speed : 0-75m/s
Air humidity : 0~100%RH
Atmospheric pressure : 300~1250hPa
Light intensity : 0~200000Lux
PM2.5 : 0~1000μg/m3
Carbon dioxide : 400~10000 ppm

Wind direction : 0~360°
Air temperature : -40~85℃
Rainfall : 0~200mm/h
Total radiation : 0～2000W/㎡
Pm10 : 0~1000μg/m3
Sunshine hours : 0～6553.5 h

QOTO

PH sensor



Specification
DC power supply : 9–24V DC
Average power : 48 mW
Measuring range : 4-10 PH
Resolution : 0.1 PH
Measurement accuracy : ±0.5PH
Protection level : Ip65
Output signal : RS485(Modbus protocol)
Working temperature : 0℃ -65℃

Soil sensor



Specification
DC power supply : 9-24V DC
Average power : 150 mW
Temperature measuring range : -40℃- 80℃
Moisture measuring range : 0-100%
Temperature accuracy : ±0.5℃
Moisture accuracy : 0-53% is±3% 53%-100% is ±5%
Responding time : < 1S
Protection level : Ip68

Tube Soil Sensor



Specification
DC power supply : 10–30V DC
Average power 470mW
Temperature measurement range: -15℃ - 35℃
Humidity measurement range: 0-100%RH
Temperature accuracy : ±0.5℃
Humidity accuracy:±5%
Temperature resolution : 0.1℃
Humidity resolution : 0.1%RH
Output signal : Rs485
measurement layers : 5 layers
Working temperature : -40℃ - 80℃

water level sensor



Specification
DC power supply : 10–30V DC
Maximum power consumption : 0.2W
Protection level : IP68
Overload capacity : <1.5 times range
Measuring medium : oil, water, etc. that are non-corrosive to stainless steel (long-term measurement requires ⩽60℃)
Sampling time : 2400 times/s

Home Garden Water Timer

QOTO: Step into Era of intelligent control with you

Home Garden Water Timer | Smart automatic watering equipment

App options or APP Users can download the app from App market, please check the user manual or our website for registration and connection tip.



Product parameters

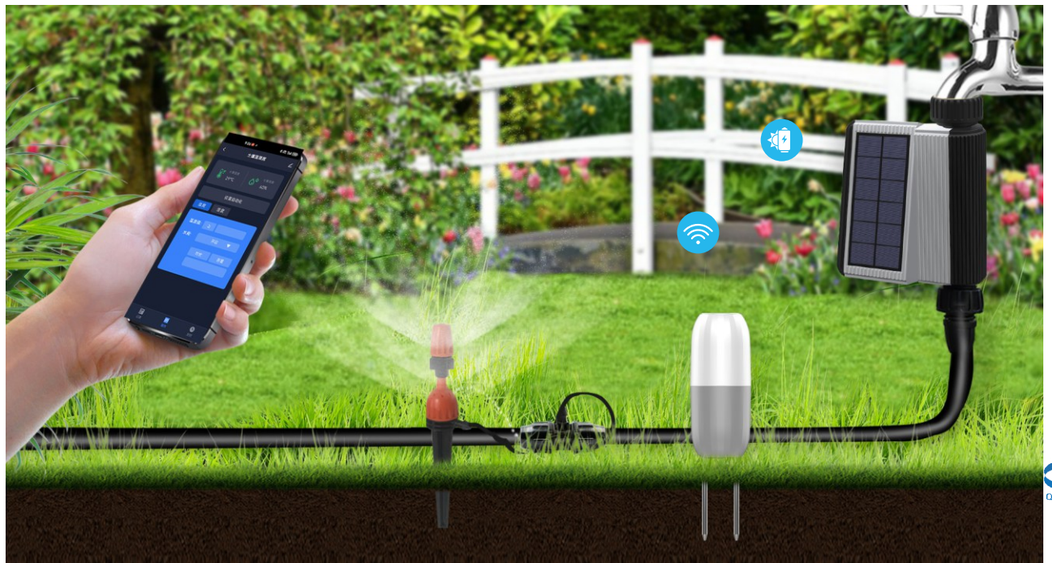
Model: QT-08W
Power supply: solar powered
Communication protocol: WiFi
Communication distance: ⩽100 meters (distance in open space)
Protection level: IP65
Caliber: 3/4”
Ambient temperature: 0~70°C
Medium temperature: 1~70°C



QOTO

Advantages

1. Solar powered, no need to replace the battery (the built-in battery has a lifespan of more than 8 years)
2. Mobile phone remote control watering
3. Directly connected to WiFi, no gateway required, about 100 meters away in open space
4. Power detection function, APP displays charging and non-charging status
5. Two watering modes are available: duration/capacity controlled watering
6. Historical recording function, view watering and soil moisture records (need to add soil moisture sensor)
7. Can record statistical water consumption
8. Timing watering function
9. Set up automated irrigation (and soil temperature and humidity sensors)
10. When watering is turned on, the amount and time of watering will be fed back to the mobile phone in real time, and water shortage reminder will be provided.
11. After setting the timer program, you can continue to perform the set tasks even if there is no network.
12. Share devices with family and friends



Home Garden Water Timer

Model: QT-09Z
Power supply:4 pcs AA battery
Communication protocol: zigbee/(or Bluetooth customized)
Communication distance: ⩽50M (Open area)
Protection Level:IP65
Caliber：3/4''
Environment temperature: 0~70℃
Water temperature:1~70℃



Main advantages

1.Powered by 4 AA alkaline batteries, standby for more than 6 months
2.Remote control watering with mobile phone (zigbee gateway required).
3.Two irrigation modes are available: watering based on duration/capacity
4.Single watering and cycle watering are optional.
5.irrigation based on timed schedule
6.Delayed watering in rainy and snowy weather
7.History recording, view irrigation records, and water consumption
8.When watering task is on, the amount of watering will be fed back to the mobile phone in real time, and water shortage remind is also available when run out of water
9.After setting the watering task, you can continue to perform the tasks even if it is offline
10.Share devices with family and friends
11.Scene automation function, which can be set to be linked with other devices
12.must use a gateway to connect to WiFi, the signal is more stable
13.Zigbee and Bluetooth protocols each have their own advantages. Your consult for more details and customization needs are welcome at any time





Model: QT-06Z
Power Supply: 4 pcs AA battery
Communication protocol: Zigbee/Bluetooth
Protection Level:IP66
Environment temperature:0~70℃
Water temperature: 1~70℃
Inlet: 1/2''3/4''1''
Outlet: 3/4''
Communication distance: ≦50M(open area)

Main advantages

1.Open and close the valve by mobile phone remote control
2.Set up irrigation schedule by quantity or by duration, irrigation mode can be switched at will
3.Cycling irrigation or single irrigation is optional
4.Once the timing program is settled, the irrigation controller still keep watering following the schedule even the Internet is off
5.Statistical record of water consumption and duration in every month every times
6.When it starts to water, the watering consumption and duration will be fed back to the phone. Water shortage warning will be when it run out of water.
7.Rain and snow days delay.
8.Zigbee and Bluetooth protocols each have their own advantages. Your consult for more details and customization needs are welcome at any time
9.Can be shared with family members to use together
10.Intelligent linkage
11.Watering via voice control
12.Working with gateway, the signal is more stable and one gateway can connect 8 smart water timers
13.Powered by 4 AA alkaline batteries, standby for more than 6 months

Home Garden Water Timer



Model：QT-05M

Power Supply: 2 PCS NI-MH battery (solar power)
Communication protocol：zigbee
Protection Level:IP66
Environment temperature:0~70℃
Water temperature: 1~70℃
Caliber: 1/2''3/4''
Communication distance: ≦100M(open area)

Main advantages

1.Remote control: When the phone connects the timer, users can remote control the valve via App
2.Real-time feedback: users can check timer status without camera as real time feedback of open and close.
3.Regulate water flow: via 100% in App, 5% accuracy
4.Timed irrigation: 30 timed programs, setting the water flow at the same time
5.Manual countdown: irrigation duration can be set, the timer will automatically memorize the last countdown.
6.Weather linkage: local weather is linked to the device, and realize automatic watering according to the local weather.
7.Smart linkage: interaction with other smart devices and realize different automation scene
8.One-key execution: one-key execution to activate multiple devices, and control at the same time according to the set conditions.
9.Voice watering: support most of the smart voice devices such as Alexa, Google Assistant, DuerOS.
10.Shared equipment: sharing with family members
11.Full-pass caliber: no shrinking output port, make sure smooth flow, and the water pressure will not be reduced.
12.Group creation: Control the devices in the same group at the same time
13.History record: Record for each opening, starting time and duration.



Model：QT-07S （with gateway)

Power supply: 2pcs 1.5V AA dry batteries
Standby time: 2000mAh, more than 6 months
Communication protocol: Zigbee APP
Response time: 60s
Water content range: 0~100%
Water content accuracy: 0 ~ 50 % (+3%),50%~100%(+5%)
Temperature measuring range: -5℃~60℃
Temperature accuracy: ±1℃



Model: QT-10S (with gateway)

Power supply: 3PCS 1.5V AA batteries
Standby time: 2000mAh, more than 6 months
Communication protocol: Bluetooth/WIFI APP
Response Time: 60s
Water content range: 0~100%
Water content accuracy: 0 ~ 50 % (+3%),50%~100%(+5%)
Temperature measuring range: -5℃~60℃
Temperature accuracy: ±1℃

Main advantages

1.Monitor real-time soil moisture and temperature data
2.Check history curve record in App
3.Linkage with our smart water valve to realize automatic watering.
4.Powered by No.5 batteries, low power consumption, long standby time
5.High sensitivity probe, quick respond, stable and accurate measurement.
6.Quick installation and fast measurement.