

IoT Valve Actuator

VC200-R/VC201-R



LoRaWAN
communication



Timing Control



Flow Control



Remote Control



IP Rating: IP65

Product Overview



With the rapid development of microelectronics and computer technology, providing technical guarantee for the intelligentization of electric valves. Gentos has newly researched and developed a cloud-controlled IoT valve actuator VC200-R/VC201-R, which is an innovative product in the field of electric valve intelligence.

The products use LoRa wireless communication technology, which supports LoRaWAN communication protocol, and has the characteristics of long-distance transmission and strong penetration capabilities. Through cloud servers, users can remotely control IoT valve actuator on their PCs, greatly facilitating people's control over water systems.

Product Features

- LoRaWAN communication protocol
- Wireless communication, no wiring
- Long transmission distance and strong penetration ability
- The valve can be adjusted 0-100% opening to control the flow rate
- Timing control
- IP Rating: IP65

Applications

Farm Irrigation: Farm and gardening irrigation system flow control.

Household Water Management: Automatic garden & vegetable watering system control.

Building Water Management: Remote water & flow control management.

Aquaculture: Control the flow rate to meet various water demands for fish or shrimp.

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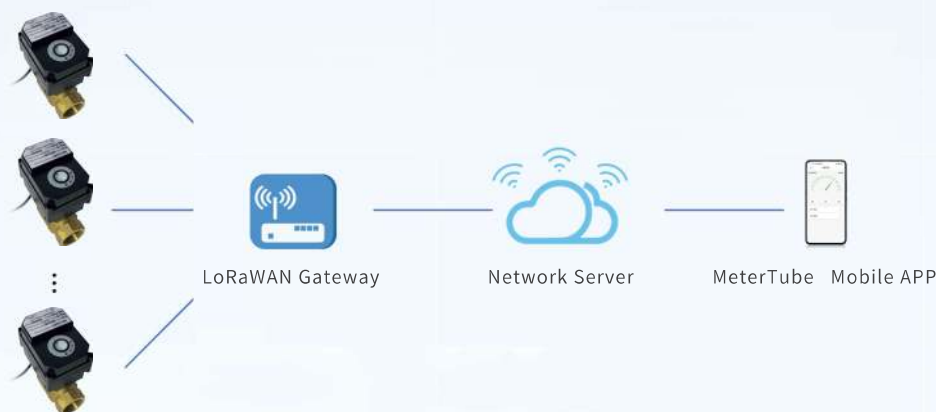


Cloud Server

LoRa (from "long range") is a physical proprietary radio communication technique. LoRaWAN (Wide Area Network) defines the communication protocol and system architecture.

Together, LoRa and LoRaWAN define a Low Power, Wide Area (LPWA) networking protocol designed to wirelessly connect devices to the internet in regional, national or global networks, and targets key Internet of things (IoT) requirements such as bi-directional communication, end-to-end security, mobility and localization services.

The LoRaWAN architecture contains four major components:



In this architecture, you can see how LoRa and LoRaWAN allow wide and dense networks of edge devices to be connected. This allows you to capture and monitor data from thousands of nodes in a manageable way.

Comparison Table

Model	Category	Communication	Functions
VC200-R	VC200-R (Standard)	LoRa	Timing, Valve Adjustment, MeterTube APP Control
VC201-R	VC201-R (Standard + Power Failure Mode Control)	LoRa	Timing, Valve Adjustment, MeterTube APP Control Power Failure Mode Control

Product Specification (Unit: mm)



Material	Caliber	Interface Type	D	L	H
Stainless Steel	DN15	2-Way internal thread G1/2	G1/2"	63	93
	DN20	2-Way internal thread G3/4	G3/4"	66	100
	DN25	2-Way internal thread G1	G1"	89	110
Copper	DN15	2-Way internal thread G1/2	G1/2"	60	96
	DN20	2-Way internal thread G3/4	G3/4"	67	102
	DN25	2-Way internal thread G1	G1"	74	109
	DN32	2-Way internal thread G1 ^{1/4}	G1 ^{1/4} "	86	117

*Note: H/L/D refers to valve body materials and caliber specifications, with a tolerance of $\pm 1\text{mm}$.

Product Model

Format of type selection: IoT Valve Actuator Model: A-B-C

Model	Description	
IoT Valve Actuator	Applicable Medium: Water	
	Power Supply Voltage: DC5V	
	Maximum Power: 3W	
	Output Torque: 2Nm	
	MeterTube APP: Available	
	Controller Operation: Remote control via MeterTube mobile APP	
	Operating Pressure: ≤1.0MPa	
	Connection Method: 2-Way internal thread G	
	IP Rating: IP65	
	Medium Temperature: ≤100℃	
	Valve Body Material: Brass, Stainless Steel	
	LoRa Communication:Support LoRaWAN communication protocol	
Maximum transmit power: 22dBm		
Temperature: -40℃~85℃		
Specifications		
A	Function selection	
1	VC200-R: Timing, Valve Adjustment	
2	VC201-R: Timing, Valve Adjustment, Power Failure Mode Control	
B	Valve body material and caliber specifications	
	Material Caliber Interface Type D L H	
1	Stainless Steel	DN15 2-Way internal thread G1/2 G1/2" 63 93
		DN20 2-Way internal thread G3/4 G3/4" 66 100
		DN25 2-Way internal thread G1/2 G1/2" 89 110
2	Copper	DN15 2-Way internal thread G1/2 G1/2" 60 96
		DN20 2-Way internal thread G3/4 G3/4" 67 102
		DN25 2-Way internal thread G1/2 G1/2" 74 109
		DN32 2-Way internal thread G1 ^{1/4} G1 ^{1/4} " 86 117
C	LoRa Frequency Selection	
1	EU868 Frequency: 863000000~865400000, Unit: Hz	
2	US915 Frequency: 902300000~914900000, Unit: Hz	
3	CN779 Frequency: 780100000~786500000, Unit: Hz	
4	EU433 Frequency: 433775000~434665000, Unit: Hz	
5	AU915 Frequency: 915200000~927800000, Unit: Hz	
6	CN470 Frequency: 470300000~489300000, Unit: Hz	
7	AS923(HK) Frequency: 920000000~925000000, Unit: Hz	

Selection Sample: IoT Valve Actuator, Specification: 1-1-DN15-1

Description: Model VC200-R with Timing, Valve Adjustment, Stainless Steel Pipe, for Caliber Size DN15, EU868 Frequency: 863000000~865400000, Unit:Hz