

IoT Valve Actuator

VC301-R/VC311-R



LoRaWAN
communication

VC311-R

VC301-R



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 VC301-R/VC311-R, which is an innovative product in the field of electric valve intelligence.

The product uses 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
- Support 0~100% opening to keep the flow rate
- Support to be adjusted manually
- Timing control
- IP Rating: IP65

Applications

New Energy: Hydrogen Decomposition, Lithium Battery Cooling, Data Cooling, Solar Energy.

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.

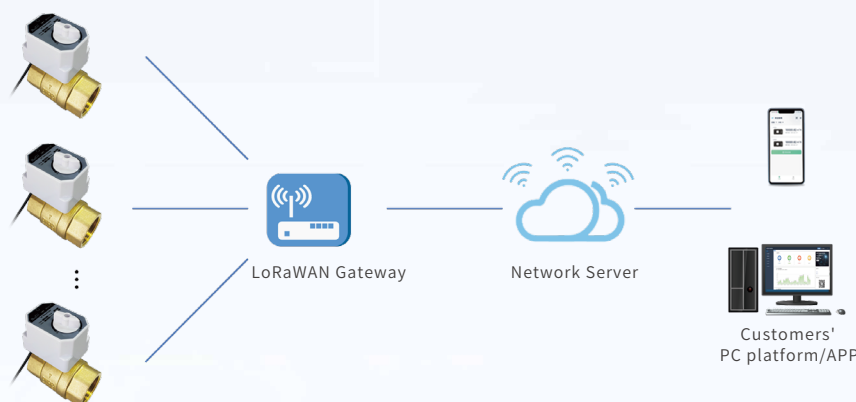
Aquaculture: Control the flow rate to meet various water demands for fish or shrimp.

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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:

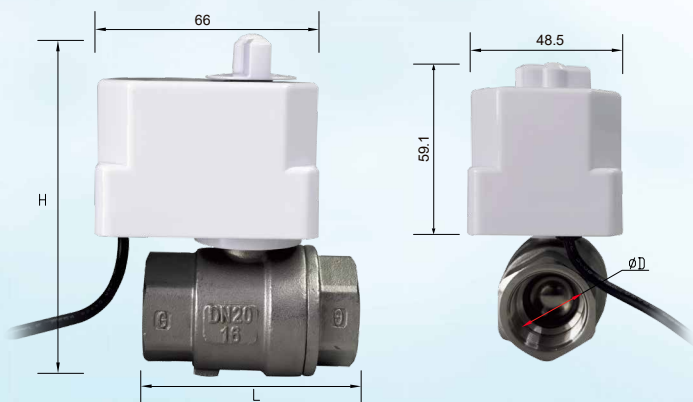


In this architecture, you can see how LoRa and LoRaWAN allow wide and dense networks of edge devices to be connected. This allows you to capture and monitor data from thousands of nodes in a manageable way.

Comparison Table

Model	Category	Communication	Functions
VC301-R	VC301 Power off reset	LoRa	Timing, Valve Adjustment, Power off state control
VC311-R	VC311 Manual and automatic adjustable	LoRa	Timing, Valve Adjustment, Power off state control, Can be adjusted manually

Product Specification (Unit: mm)



Material	Caliber	Interface Type	D	L	H(301)	H(311)
Stainless Steel	DN15	2-Way internal thread G1/2	G1/2"	63	86	98
	DN20	2-Way internal thread G3/4	G3/4"	66	93	105
	DN25	2-Way internal thread G1	G1"	89	103	115
Copper	DN15	2-Way internal thread G1/2	G1/2"	60	89	101
	DN20	2-Way internal thread G3/4	G3/4"	67	95	107
	DN25	2-Way internal thread G1	G1"	74	102	114
	DN32	2-Way internal thread G1 ^{1/4}	G1 ^{1/4} "	86	110	122

*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
	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

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

Description: Model VC301-R with Timing, Valve Adjustment, Power off state control, Stainless Steel Pipe, for Caliber Size
DN15, EU868 Frequency: 863000000~865400000, Unit:Hz