
Wireless Valve Controller

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Wireless Sensor Network Based on LoRa Technology



RA10

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General Description

The RA10 is a Wireless Valve Controller for Netvox ClassA type devices based on the LoRaWAN open protocol and is compatible with the LoRaWAN protocol.

RA10 can control the valve open/close status remotely or manually

Working Principle

The module controls the motor drive IC TB6549F output state to control the motor forward or reverse.

Example Applications

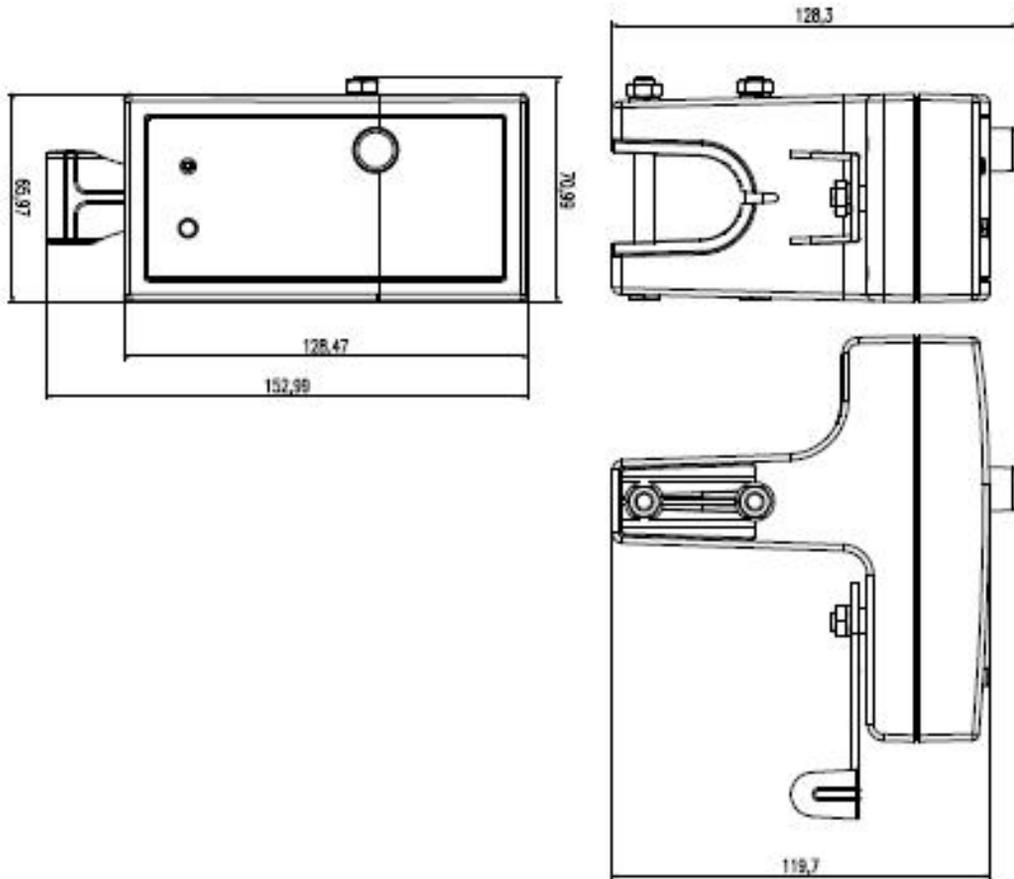
- Automatic irrigation

Features of NETVOX Sensors

- Uses SX1276 wireless communication module
- DC 12V Power supply
- Control the valve open/close status
- Compatible with LoRaWANTM Class C
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Configuration parameters can be configured via a third-party software platform, data can be read and alerts can be set via SMS text and email (optional)
- Applicable to third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne

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Technical Specifications



Electric

Power Supply	DC 12V
Working Voltage	12 VDC
Standby Current	25 mA
Maximum Load Current Consumption	550 mA

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm ; AS923 16dbm ; AU915 20dbm ; CN470 19.15dbm ; EU868 16dbm ; KR920 14dbm ; IN865 20dbm ;
Rx Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate=293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	Up to 10 km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps~50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870 , US902-928 , AU915-928 , KR920-923 , AS923 , CN470-510 Configured before shipment

Physical

Physical Size	152.99mm x 70.99mm x128.3mm
Operating Temperature	-20 ° C ~ 55 ° C
Storage Temperature	-40 ° C ~ 85 ° C
Ambient Humidity	<90% RH (non-condensing)
Applicable Pipe Diameter	6 British inch (3/4 US inch)
Actuating Arm Maximum Torque	7.5 kgf
Rotation Angle	90 degrees
Weight	Main 0.4 kg Adapter0.11 kg