

FRANKEVER DN20

FRANKEVER DN20 Smart Water Valve User Manual

Model: DN20

1. INTRODUCTION

The FRANKEVER DN20 Smart Water Valve is a WiFi-enabled device designed for automated water management. This system allows remote control of water flow for various applications, including faucets, hoses, and sprinkler systems. It integrates with smart home platforms like Alexa and Google Assistant, providing convenient control and scheduling capabilities for efficient water usage and plant care.



Figure 1.1: The FRANKEVER DN20 Smart Water Valve can be used in various settings such as swimming pools, gardens, bathrooms, and farmlands for automated water control.

2. PRODUCT OVERVIEW

The DN20 Smart Water Valve offers several features to enhance water management:

- **Clear Indication and Smart Alerts:** Features visible LED lights (green for open, red for closed) and provides app notifications for scheduled operations or unexpected interruptions. The valve can be configured to automatically close during power outages to prevent leaks.
- **Smart Scene Modes:** Allows creation of automated interactions with other Tuya-compatible devices. For example, the valve can close automatically if a water sensor detects a leak. Custom scenes can be based on weather conditions or temperature.
- **App Control:** Connects directly via WiFi, eliminating the need for additional hubs. Users can set personalized watering schedules and control the valve remotely through a dedicated application.
- **Voice Control:** Compatible with Alexa and Google Home for hands-free operation.
- **High-Quality Craftsmanship:** Constructed from IP65 waterproof, durable, and UV-resistant plastic. The ball valve design ensures a reliable seal to prevent leakage.



Figure 2.1: Key features include water valve control, WiFi connectivity, water temperature and volume statistics, scheduling, timing, countdown, and a USB interface.

3. SAFETY INFORMATION

- Ensure the power supply is disconnected before installation or maintenance.
- Install the device in a location protected from extreme weather conditions, despite its IP65 rating, to prolong its lifespan.
- Do not attempt to disassemble or repair the device yourself. Contact customer support for assistance.
- Verify that the water pressure in your system is within the operating limits of the valve.
- Keep the device away from children and pets.

4. SETUP AND INSTALLATION

4.1 Physical Installation

1. **Prepare the Installation Site:** Choose a location on your water line where the valve can be easily accessed and has a stable WiFi signal.
2. **Turn Off Water Supply:** Before proceeding, ensure the main water supply to the installation area is

completely shut off.

3. **Install the Valve:** Integrate the DN20 valve into your existing water pipe system. Ensure a secure and watertight connection. The valve is designed for 3/4 inch pipes.
4. **Connect Power:** Plug the valve's power adapter into a suitable electrical outlet.
5. **Restore Water Supply:** Slowly turn the main water supply back on and check for any leaks around the valve connections.

WATER CONSUMPTION STATISTICS

Record Real-Time Water Consumption,
Save Water, Save Time. Save Money



Figure 4.1: The diagram illustrates the installation of the smart water valve between the main water supply and the control water outlet, with the power plug connected.

4.2 App Download and Pairing

1. **Download the App:** Search for the "Tuya Smart" or "Smart Life" app in your smartphone's app store (iOS or Android) and install it.
2. **Register/Log In:** Open the app and create a new account or log in with an existing one.
3. **Add Device:** Follow the in-app instructions to add a new device. Select "Water Valve" or a similar category.
4. **Connect to WiFi:** Ensure your phone is connected to a 2.4GHz WiFi network. The app will guide you through connecting the valve to your home WiFi.

5. **Confirmation:** Once successfully paired, the valve's LED indicator will confirm connection, and the device will appear in your app.

5. OPERATING INSTRUCTIONS

5.1 Manual Control via App

From the app's main screen for the DN20 valve, you can manually open or close the valve. The app interface typically displays the current state (open/closed) and allows for immediate adjustments.

- Tap the "ON" or "OFF" button to open or close the valve.
- Adjust the percentage slider to control the water flow rate (0-100%).

5.2 Setting Watering Schedules

The app allows you to create automated watering schedules:

1. Navigate to the "Schedule" or "Timer" section within the valve's app interface.
2. Add a new schedule.
3. Set the desired start time, duration, and days of the week for the watering cycle.
4. Save the schedule. The valve will now operate automatically according to your settings.



Figure 5.1: The app displays the valve's open percentage, water usage, temperature, and provides options for scheduling, quantifying water use, and settings.

6. SMART FEATURES INTEGRATION

6.1 Voice Control (Alexa & Google Home)

The FRANKEVER DN20 Smart Water Valve can be controlled using voice commands through Amazon Alexa or Google Assistant:

1. **Link Accounts:** In the Alexa or Google Home app, enable the "Tuya Smart" or "Smart Life" skill/service and link your account.
2. **Discover Devices:** Ask your voice assistant to discover new devices. The DN20 valve should appear.
3. **Voice Commands:** Use commands such as:
 - "Alexa, open the smart water valve."
 - "Hey Google, close the smart water valve."



Figure 6.1: The smart water valve can be controlled hands-free using voice commands through Amazon Alexa and Google Home devices.

6.2 Smart Scene Automation

Create custom automation rules within the app to enhance your smart home experience:

- **Leak Detection Integration:** Link the valve with a compatible water leak sensor. If a leak is detected, the valve can be set to automatically close, preventing water damage.

- **Environmental Triggers:** Configure scenes based on external factors like weather conditions (e.g., close valve if rain is detected) or temperature.



Figure 6.2: The app provides water usage statistics and allows setting alarms for when water volume exceeds a predefined limit.

7. MAINTENANCE

- **Cleaning:** Periodically wipe the exterior of the valve with a soft, damp cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly check for any signs of wear, damage, or leaks around the connections.
- **Winterization:** In regions with freezing temperatures, ensure the valve and connected pipes are properly drained and protected from frost to prevent damage.
- **Firmware Updates:** Keep the device firmware updated through the app to ensure optimal performance and access to new features.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Valve not connecting to WiFi.	Incorrect WiFi password, 5GHz network, weak signal, or device too far from router.	Ensure correct 2.4GHz WiFi password. Move valve closer to router or use a WiFi extender. Reset the valve and try pairing again.
Valve not responding to app/voice commands.	No internet connection, valve offline, or app/voice assistant not linked correctly.	Check internet connectivity. Verify valve status in the app. Re-link app with Alexa/Google Home if necessary.
Valve not opening/closing fully.	Obstruction in the valve mechanism or power issue.	Ensure no debris is obstructing the valve. Check power supply. If problem persists, contact support.
Unexpected water flow during power outage.	Valve not configured to close automatically on power loss.	Access app settings to enable the "auto-close on power outage" feature.

9. SPECIFICATIONS

Model Number	DN20
Brand	FRANKEVER
Manufacturer	FRANKEVER
Product Dimensions	9.5 x 7.7 x 11.2 cm
Item Weight	771 g (1.7 Pounds)
Material	Plastic, Metal
Voltage	5 Volts (DC)
Display Type	LCD or LED (referring to app interface)
Waterproof Rating	IP65
Connectivity	WiFi (2.4GHz)
Compatibility	Alexa, Google Home, Tuya Smart/Smart Life App

10. WARRANTY AND SUPPORT

For any inquiries or technical assistance, please contact FRANKEVER customer support. The manufacturer commits to responding to all inquiries within 24 hours.

Specific warranty details may vary by region and retailer. Please refer to your purchase documentation or contact FRANKEVER customer service for comprehensive warranty information.

