Product Specifications

An IoT Based Water Monitoring System

An IoT-Based Platform to Monitor a Water Pump

Product Overview

This IoT-based platform is designed to provide real-time monitoring of water pumps. By leveraging advanced IoT technologies, the system ensures continuous operation, minimizes downtime, and improves efficiency by tracking key performance parameters like flow rate, pressure, vibration, voltage, and current.

Technical Specifications

- **Dimensions**: 100cm x 30cm
- **Weight**: 40kg
- **Power Requirements**: 5V DC
- **Connectivity**: Wi-Fi (2.4 GHz)

Compatibility

- **Pump Compatibility**: Suitable for 1 HP or higher pumps with standard fittings.
- **Application Compatibility**: Android 9.0 and later, iOS 13.0 and later.

Features

1. **Real-Time Monitoring**
    - Tracks critical parameters such as flow rate, pressure, vibration, voltage, and current.
    - Provides instant data to identify anomalies before they become major issues.

2. **Performance Alerts**
    - Notifies users of potential problems like low pressure, abnormal vibrations, or voltage fluctuations.
    - Customizable thresholds to suit specific requirements.
3. **Cloud-Based Dashboard**
    - Data visualization through platforms like ThingSpeak for remote access and monitoring.
    - Real-time insights accessible via secure web.

Hardware Components

1. **Microcontroller**: ESP32 with built-in Wi-Fi.
2. **Sensors**:
    - **Pressure Sensor**: 1-1.2 MPa, ±1.5% accuracy.
    - **Flow Sensor**: YFS-201, 1–30L/min, ±5% accuracy.
    - **Vibration Sensor**: SW-420, adjustable sensitivity.
    - **Voltage Sensor**: 0–250V AC, ±1% accuracy.
    - **Current Sensor**: ZMCT103C, 5A–100A AC, ±3% accuracy.

Enhancing Performance

- Software updates available through the cloud dashboard.
- Hardware inspection recommended every six months for optimal performance.

Warranty and Support

- **Warranty**: 1 year from the date of purchase.
- **Customer Support**: Email: support@iotwaterpumpmonitor.com | Website: www.iotwaterpumpmonitor.com/support