Specifications

Fire Extinguisher Pressure Sensor (FEPS)

Name: PIKA SENSE

Model: PIKA - FE

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1. Applications

- IoT-based monitoring of fire extinguishers for pressure, temperature, humidity, and inclination.
- Monitoring pressure in gas pipelines in smart cities.*
- Monitoring pressure in water supply networks in smart cities.*
- Monitoring pressure in smart firefighting systems.

2. Features

- Integration with mechanical extinguishers pressure gauges via a run tee brass fitting.
- Monitors pressure of fire extinguishers, device's internal temperature and humidity and detects whether extinguishers are placed upside down (inclination).
- Transmits data to a cloud platform via LoRaWAN for remote monitoring.
- Collects long-term pressure, temperature, humidity, and inclination data for equipment condition analysis.
- Provides the settings of threshold, alerts, notifications through the cloud platform and the NFC Android app.

3. Specifications

Compatible with	Powder/Foam extinguishers, Gas/Water pipelines
Pressure Sensor	Range: 0–0.6/1.6/4/10/20/30 MPa Non-linearity: ±0.5 %FS, BFSL Repeatability: ± 0.05 %FS Hysteresis: ±0.05 %FS
Temperature Measurement Range	-10 to 70°C, Accuracy: ±1°C
Humidity Measurement Range	0–99% RH, Accuracy: ±3% RH
Inclination Range	±90° (X, Y, Z axes), Accuracy: ±1°
Configuration	NFC Android App
IoT Communication	LoRaWAN Class A Band: EU433, CN470, IN865, EU868, AU915, US915, KR920, RU864, and AS923-1/2/3 Radiated RF Power: +16dBm Sensitivity: -137dBm Internal Antenna
Installation	M10 / M20 / G1/4 thread
Battery	2*14250 batteries (3.6VDC/2400mAh)
Protection Level	IP65

4. Power Consumption and Battery Life Calculation

Battery Specs: Two 14250 batteries (3.6VDC/2400mAh); lifespan ≥3 years with a collection frequency of 8 hours/cycle.

Example calculations for battery life based on usage scenarios:

- **Scenario 1**: Data collection every 4 hours, uplink every 8 hours: ~4.95 years.
- **Scenario 2**: Data collection every 4 hours, uplink every 12 hours: ~6.4 years.