



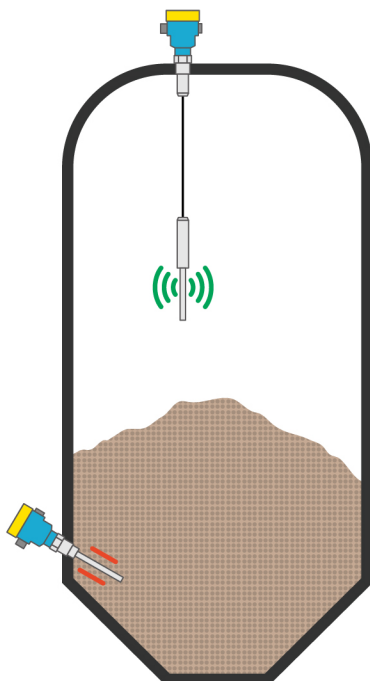
## Tube-11 Vibrating Rod Level Switch

### Overview

Tube-11 is China's first level switch with an innovative dual-tube probe, designed for measuring powders, granules, and sediment in water. Backed by 10+ core patents and dual gas/dust explosion-proof certification, it ensures reliable detection of various solids. Its strong adaptability and high accuracy make it ideal for demanding industrial environments.

### Principle

A piezoelectric driver excites the Tube-11's vibrating rod. When the rod contacts material, vibration amplitude decreases. The electronics detect this change and output a switch signal.

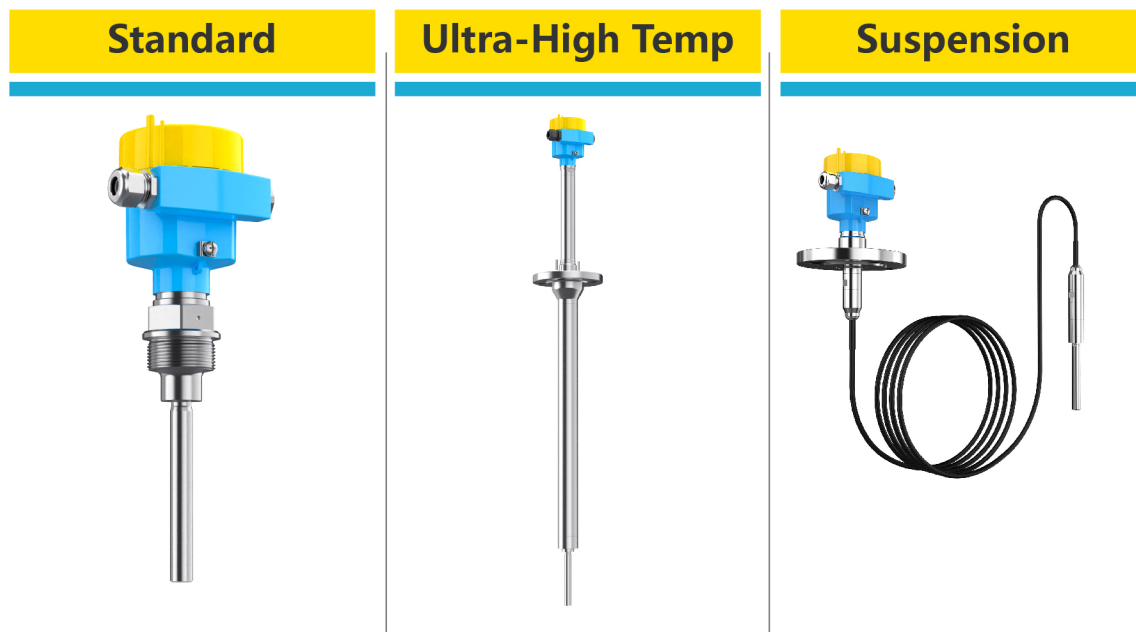


### Benefits

- **Dual-tube probe design:** China's first, suitable for various solid materials and sediment measurement in water.
- **High sensitivity:** detects media density as low as  $0.02\text{g/cm}^3$ , covering most conditions.
- **High temperature resistance:** standard up to  $250^\circ\text{C}$ , ultra-high up to  $400^\circ\text{C}$ , industry-leading.
- **Anti-clogging design:** ideal for viscous or sticky media.
- **Intelligent self-diagnosis:** accurate fault detection, easy maintenance.
- **No calibration needed:** plug-and-play, simple operation.
- **Cable type:** flexible cable connection up to 20 meters, suitable for long-distance measurement.

\*10+ Patents:

201610511184.7 (Invention), 201510009538.3 (Invention), 201510059187.7 (Invention), 201520009337.9, 201520012324.7, 201520215527.6, 201520332293.3, 201620679133.0, ZL 201920496471.4, ZL201921754721.6, Software Copyright Registration No. 5443153



Applications	<ul style="list-style-type: none"> <li>Widely used in silos, dust bins, hoppers, and packaging lines. Ideal for extreme temperature level measurement in metallurgy, chemical, cement, and waste incineration industries.</li> </ul>		
Measurement Medium	Powders, granular solids, and sediments <sup>①</sup>		
Structure	Rod	Cooling protective sleeve design	With suspension-type flexible cable, up to 20 meters
Process Temp	-50 ~ 150°C	-50 ~ 400°C	-50 ~ 250°C
Process Connection	Flange, thread, clamp, customizable		
Signal Output	Relay, two-wire		
Process Pressure	-1 ~ 16bar		
Probe Material	316L, 316L coated with Enamel, ECTFE, PFA, 318S13, Hastelloy C-22		
Housing Material	Aluminum alloy, stainless steel <sup>②</sup>		
Qualifications & Certifications	<ul style="list-style-type: none"> <li>Gas &amp; Dust Explosion-Proof<sup>③</sup>: <ul style="list-style-type: none"> <li>Explosion-Proof — Ex db IIC T1...T6 Gb      Ex tb IIIC T80°C...T440°C Db</li> <li>Intrinsically Safe — Ex ia II CT1...T6 Ga      Ex ia IIIC T<sub>200</sub>100°C...T<sub>200</sub>450°C Da</li> </ul> </li> <li>CE: LVD certificate, EMC certificate</li> <li>Ingress Protection: IP66/IP67</li> </ul>		

Note:

① Maximum particle size: 20mm (requires medium density < 0.05g/cm<sup>3</sup>)

② Customizable with special materials such as food-grade stainless steel, tantalum, Hastelloy, and titanium alloy

③ Explosion-proof versions available upon request