

# Temperature Calibration in the Power Sector

## Elevating Temperature Reliability with Isotech Solutions in the Power Sector (Generation, Transmission and Distribution)

In the realm of power generation, transmission and distribution, a sector deeply rooted in traditional technology, Isotech has emerged as a pioneer, revolutionising temperature measurement and calibration. Our comprehensive range of products, including Dry Block cum Liquid Temperature Calibrators, Fast-Cal, milliK, and Semi-standard PRTs, has redefined accuracy and precision in an industry where temperature monitoring is pivotal.

### Client-Centric Solutions

In the power sector landscape, where electrical power availability for instrumentation remains inconsistent, traditional temperature measurement methods often fall short. Our products bridge this gap, catering to applications like monitoring cooling jackets on transformers, safeguarding against frost with protection systems, and ensuring accurate thermal trips on circuit breakers.

### Precision in Purpose

While precision is paramount in most industries, power sector emphasises monitoring over control. Temperature fluctuations of a few degrees within the cooling system of a large transformer are not inherently problematic, given the varying load conditions. However, precision is indispensable in ensuring protection circuits activate accurately, safeguarding the entire system.

### Mastering Mechanical Nuances

Power sector instruments frequently rely on mechanical rather than electronic components, presenting unique challenges. Achieving harmony between heat source and sensor becomes crucial in



these systems, as an imbalance can lead to significant errors. Our adept dry block calibrators, designed with deeper insertion depths and additional insulation, ensure accurate calibration, even when aiming for approximately  $\pm 1^\circ\text{C}$  precision.

### Balancing Efficiency and Reliability

Meeting the diverse needs of power sector applications is crucial in balancing efficiency and reliability. Incorporating the intricacies of rigid stem thermometers, some housing bi-metallic sensors, presents its own challenges. While cost-effective, these systems demand meticulous setup for setting alarm/trip points.



### Advancing with Technology

As newer power sector installations integrate electronic instrumentation with battery-powered data logging, Isotech remains at the forefront. Our solutions align seamlessly with these advancements, ensuring the calibration of solar-powered, electronically managed systems are a breeze. These systems often employ the familiarity of industrial-style thermocouples or resistance thermometers.

In the dynamic domain of power sector, Isotech has redefined precision, accuracy, and reliability. Through our comprehensive range of products and deep industry understanding, we enable power sector professionals to monitor and safeguard critical systems with unmatched confidence.

### Global Success Stories

ITPL's (Isothermal Technology Private Ltd., India) strategic excellence and comprehensive solutions make them a dominant industry player, serving renowned clients worldwide.

**Nuclear Power Plant:** ITPL secured a Nuclear Power Plant contract by introducing ISOCAL-6 options and emphasising combined dry block and liquid advantages, in terms of cost saving for the user and expanding application requirements.

**Thermal Power Plant:** At a Thermal Power Plant, ITPL's strategic approach of featuring ISOCAL-6 options for calibration in dry, liquid and black body mode with one bath has turned customer into considering them most suitable vendor for contract.

