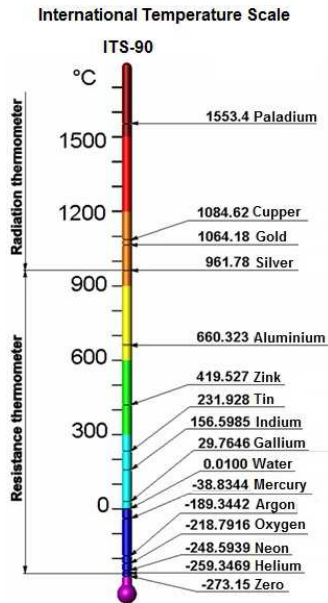




CALIBRATION

Traceable to ITS-90 and EN60751



Calibration is needed for high accuracy or for verification to third party.

Calibration of RTD sensors

1. The sensors are compared at -195 °C, -75 °C, 0 °C and 100 °C with traceable references.
2. A certificate with measurements, calculated Callendar Van-Dusen coefficients, uncertainty and traceability is issued.

Unique calibration

Senmatic offer a unique calibrated 4-20 mA transmitter – RTD sensor set.

What does unique calibration mean?

1. The RTD sensor is calibrated
2. The transmitter is programmed with the Callendar Van-Dusen coefficients
3. The transmitter is calibrated by simulating the RTD resistance at 3 points (4 mA, 12 mA and 20 mA)
4. Certificates for both calibrations are supplied together with the paired transmitter-sensor set

Callendar Van-Dusen coefficients?

The resistance at temperature t can be described this way $R(t) = R_0 * (1 + A*t + B*t^2 + C*(t-100)*t^3)$ where R_0 is the resistance at 0 °C and A , B and C the Callendar Van-Dusen coefficients. Above 0 °C $C=0$. By active use of the coefficients the sensors uncertainty is less than ± 0.024 °C in the calibrated range.

Calibration is only offered with 4 wire sensors