YAGEO
NEXENSOS

C220, Pt Temperature Sensor according to DIN EN 60751

Temperature range -196 °C to +150 °C

- Ideal for cryo temperatures
- Excellent long term stability and low drift
- High accuracy and interchangeability
- High thermal shock resistance
- Free of hysteresis

The C220 thin-film Pt-RTD provides the ideal curve characteristics of ceramic wire-wound RTDs with the added benefits of high vibration resistance and lower cost. High long-term stability, excellent thermal shock resistance and a hysteresis-free operating temperature range of -196 °C to +150 °C offer an ideal solution for chemical & pharmaceutical processing, cryogenics, analytical equipment, and cold chain monitoring.

Nominal Resistance R_0 [Ω]	Tolerance Class	Order Number	Packaging
Pt100	F 0.3 (B)	32207399	VCI-Plastic bag

The measuring point for the nominal resistance is 8 mm from the end of the sensor body.

Temperature Range of Tolerance Class
Validity of Class F 0.3 (B)   -196 °C to +150 °C

Temperature Coefficient
TCR = 3850 ppm/K

Response Time
Water (v = 0.4 m/s):   t0.5 = 0.06 s
                            t0.9 = 0.2 s

Air (v = 2 m/s):   t0.5 = 3 s
                            t0.9 = 13 s

Measuring Current
Pt100 Ω: 0.3 to 1 mA
(self-heating has to be considered)

Dimensions and Tolerances in mm

L: 2.3 ±0.15
W1:   1.9 ±0.15
H: 1.0 +0.3 -0.2
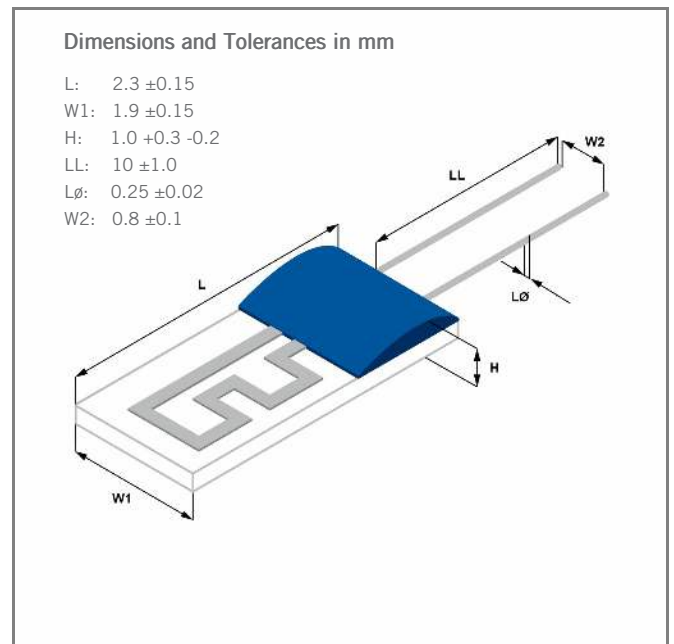LL: 10 ±1.0
Lø: 0.25 ±0.02
W2:   0.8 ±0.1

Image for illustration purposes only
Color, shape and forming of fixing drop may vary

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Long-Term Stability
The drift of the resistance value at 0 °C after a storage for 1000 hours in air at the declared upper temperature limit is not more than the tolerance value of the declared tolerance class according DIN EN 60751.
Typical drift of R(0 °C) is 0.03 % after 1000 hours at +150 °C.

Self-Heating
0.4 K/mW at 0 °C

Insulation Resistance
> 100 MΩ at 150 °C

Vibration Resistance
At least 40 g acceleration at 10 to 2000 Hz, depends on installation

Shock Resistance
At least 100 g acceleration with 8 ms half sine wave, depends on installation

Connection Technology
Brazing

Lead Type
AgPd

Tensile Strength of Leads
≥ 8 N

Packaging
VCI-Plastic bag
Alternative packaging forms on request

Storage Life
Min. 12 months (in original packaging)

Note
Other tolerances, values of resistance and wire lengths are available on request.

C220 and C420 Pt elements are optimized for low-temperature use. To avoid a potential tolerance shift, the elements should not be exposed to temperatures exceeding 150 °C during storage, assembly, or use.

Due to random sample measurements, a bending of connection wires may occur (called V-shape). This bending is batch-dependent and has no influence on the functionality of the platinum measuring resistor.

RoHS compliant ✓