

Heraeus



Platinum thin film sensor elements Low Temperature Range (-50°C to +400°C)



Heraeus Sensor Technology
Dependable sensor technology

Platinum Resistance Temperature Detector

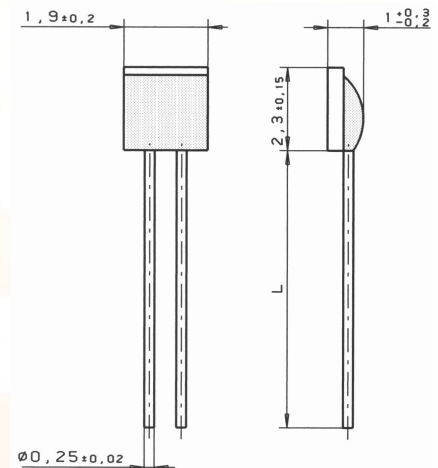
L 220

L series PRTDs are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White goods, HVAC, Energy management, Medical and Industrial equipment.

Nominal Resistance R_0	Tolerance	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B	32 207 400
	DIN EN 60751, class A	32 207 584
	DIN EN 60751, class 1/3 DIN	32 207 588

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

Specification	DIN EN 60751 (according to IEC 751)	
Temperature range	-50°C to +400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C	
Temperature coefficient	TCR = 3850 ppm/K	
Leads	AgPd	
Lead lengths (L)	10 mm +- 1 mm	
Long-term stability	max. R_0 -drift 0.04% after 1000 h at 400°C	
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation	
Shock resistance	at least 100 g acceleration with 8ms half sine wave, depends on installation	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 M Ω at 20°C; > 2 M Ω at 500°C	
Self heating	0.4 K/mW at 0°C	
Response time	water current ($v = 0.4$ m/s):	$t_{0.5} = 0.06$ s $t_{0.9} = 0.20$ s
	air stream ($v = 2$ m/s):	$t_{0.5} = 3.0$ s $t_{0.9} = 13.0$ s
Measuring current	0.3 to 1.0 mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Platinum Resistance Temperature Detector

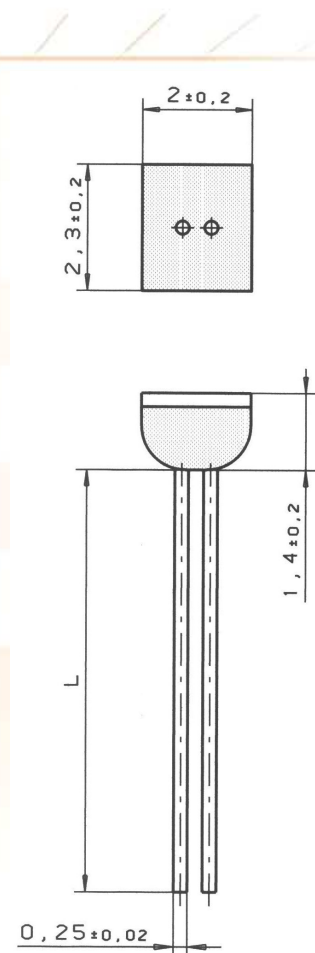
L 220 P

L series PRTDs are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White goods, HVAC, Energy management, Medical and Industrial equipment.

Nominal Resistance R_0	Tolerance	Order No.
100 Ohm at 0°C	DIN EN 60751, class B	32 207 302 (Plastic box) 32 207 608 (Vacuum packed)

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

Specification	DIN EN 60751 (according to IEC 751)	
Temperature range	-50°C to +400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C	
Temperature coefficient	TCR = 3850 ppm/K	
Leads	AuPd	
Lead lengths (L)	10 mm +- 1 mm	
Long-term stability	max. R_0 -drift 0.04% after 1000 h at 400°C	
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation	
Shock resistance	at least 100 g acceleration with 8ms half sine wave, depends on installation	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 M Ω at 20°C; > 2 M Ω at 500°C	
Self heating	0.4 K/mW at 0°C	
Response time	water current ($v = 0.4$ m/s):	$t_{0.5} = 0.20$ s $t_{0.9} = 0.30$ s
	air stream ($v = 2$ m/s):	$t_{0.5} = 3.0$ s $t_{0.9} = 9.0$ s
Measuring current	0.3 to 1.0 mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Platinum temperature sensor in thin-film technology

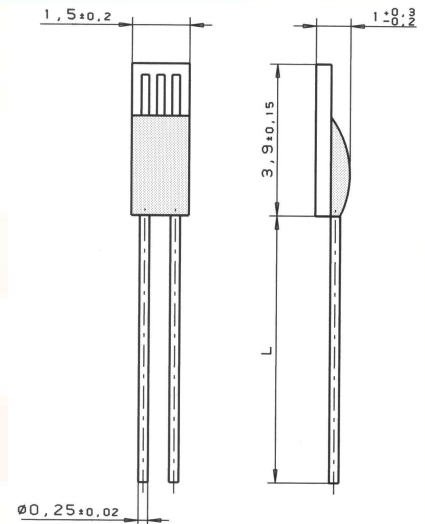
L 416

L-series platinum temperature sensors are characterized by long-term stability, excellent precision over a wide temperature range and compatibility. They are used particularly for applications with high consumption volumes, typically in the automotive, white goods, HVAC and energy generation industries as well as in medical and industrial appliances and machinery.

Nominal Resistance R_0	Tolerance	Order no. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B DIN EN 60751, class A	32 207 440 32 207 583

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

Specification	DIN EN 60751	
Temperature range	-50°C to + 400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C	
Temperature coefficient	TCR = 3850 ppm/K	
Leads	AgPd	
Lead lengths (L)	10 mm +- 1 mm	
Long-term stability	Max. R_0 drift 0.04% after 1000 h at 400°C	
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation	
Shock resistance	at least 100 g acceleration with 8ms half sine wave, depends on installation	
Ambient conditions	Use unprotected only in dry environments	
Insulation resistance	> 100 M Ω at 20°C; > 2 M Ω at 500°C	
Self heating	0.4 K/mW at 0°C	
Response time	Water current (v = 0.4 m/s):	$t_{0.5} = 0.07$ s $t_{0.9} = 0.25$ s
	Air flow (v = 2 m/s):	$t_{0.5} = 3.2$ s $t_{0.9} = 14.0$ s
Measuring current	0.3 to 1.0 mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Platinum Resistance Temperature Detector

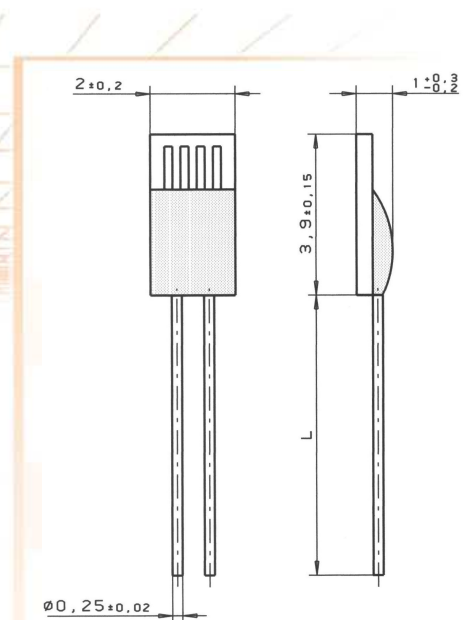
L 420

L series PRTDs are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White goods, HVAC, Energy management, Medical and Industrial equipment.

Nominal Resistance R_0	Tolerance	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B	32 207 702
500 Ohm at 0°C	DIN EN 60751, class B	32 207 703
1000 Ohm at 0°C	DIN EN 60751, class B	32 207 704
	DIN EN 60751, class A	32 207 582
	DIN EN 60751, class 1/3 DIN	32 207 587

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

Specification	DIN EN 60751 (according to IEC 751)
Temperature range	-50°C to + 400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C
Temperature coefficient	TCR = 3850 ppm/K
Leads	AgPd
Lead lengths (L)	10 mm +/- 1 mm
Long-term stability	max. R_0 -drift 0.04% after 1000 h at 400°C
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation
Shock resistance	at least 100 g acceleration with 8ms half sine wave, depends on installation
Environmental conditions	unhoused for dry environments only
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 500°C
Self heating	0.3 K/mW at 0°C
Response time	water current ($v = 0.4$ m/s): $t_{0.5} = 0.08$ s $t_{0.9} = 0.25$ s air stream ($v = 2$ m/s): $t_{0.5} = 3.5$ s $t_{0.9} = 15.0$ s
Measuring current	500 Ohm: 0.1 bis 0.7 mA 1000 Ohm: 0.1 bis 0.3 mA (self heating has to be considered)
Note	Other tolerances, values of resistance and wire lengths are available on request.



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com

Platinum Resistance Temperature Detector

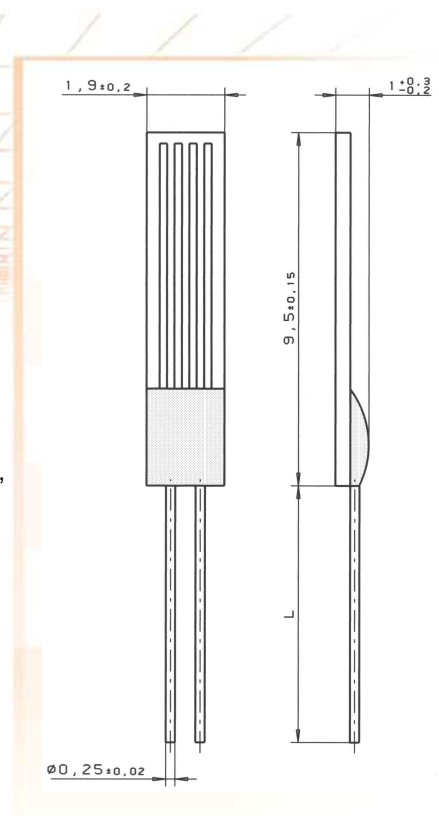
L 1020

L series PRTDs are designed for large volume applications where long term stability, interchangeability and accuracy over a large temperature range are vital. Typical applications are Automotive, White Goods, HVAC, Energy Management, Medical and Industrial equipment.

Nominal Resistance R_0	Tolerance	Order No. Plastic bag
100 Ohm at 0°C	DIN EN 60751, class B	32 207 708
	DIN EN 60751, class A	32 207 579
	DIN EN 60751, class 1/3 DIN	32 207 585
1000 Ohm at 0°C	DIN EN 60751, class B	32 207 710
	DIN EN 60751, class A	32 207 581
	DIN EN 60751, class 1/3 DIN	32 207 586

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

Specification	DIN EN 60751 (according to IEC 751)	
Temperature range	-50°C to + 400°C (continuous operation) Tolerance class B: - 50 °C to + 400 °C Tolerance class A: - 50 °C to + 300 °C Tolerance class 1/3 DIN: 0 °C to + 150 °C	
Temperature coefficient	TCR = 3850 ppm/K	
Leads	AgPd	
Lead lengths (L)	10 mm +/- 1 mm	
Long- term stability	max. R_0 -drift 0.04% after 1000 h at 400 °C	
Vibration resistance	at least 40 g acceleration at 10 to 2000 Hz, depends on installation	
Shock resistance	at least 100 g acceleration with 8ms half sine wave, depends on installation	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 M Ω at 20 °C; > 2 M Ω at 500 °C	
Self heating	0.2 K/mW at 0 °C	
Response time	water current ($v = 0.4$ m/s):	$t_{0.5} = 0.12$ s $t_{0.9} = 0.30$ s
	air stream ($v = 2$ m/s):	$t_{0.5} = 6.0$ s $t_{0.9} = 20.0$ s
Measuring current	100 Ω : 0.3 to 1.0 mA 500 Ω : 0.1 to 0.7 mA 1000 Ω : 0.1 to 0.3 mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



We reserve the right to make alterations and technical data printed. All technical data serves as a guideline and does not guarantee particular properties to any products.

Heraeus Sensor Technology GmbH, Reinhard- Heraeus- Ring 23, 63801 Kleinostheim, Germany
Phone: +49 (0) 6181/35-8098, Fax: +49 (0)6181/35-8101, E-Mail: info.HSND@Heraeus.com Web: www.heraeus-sensor-technology.com



kamet
thermoccomponents

Kamet Trading
Franciscusweg 9-10
1216 SK Hilversum

Tel. : +31 (0)35-628 2910
Fax : +31 (0)35-628 2912
E-mail : info@kamet-trading.nl