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 R0	Toler ance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class 1/3 B Class A Class B	F 0,1 F 0,15 F 0,3	32207588 32207584 32207400
1000 Ohm at 0℃	Class B	F 0,3	32207733

The measuring point for the nominal resistance is defined at 8mm 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 B: 0°C to +150°C	1 *0;3
Temperature coefficient	TCR = 3850 ppm/K	Ŋ
Leads	AgPd- wire	ť
Lead lengths (L)	10mm ±1mm	
Long-term stability	max. R₀-drift 0.04% after 1000 h at 400℃	1
Vibration resistance	at least 40g acceleration at 10 to 2000 Hz, depends on installation	
Shock resistance	at least 100g acceleration with 8ms half sine wave, depends on installation	
Environmental conditions	unhoused for dry environments only	
Insulation resistance	> 100 MΩ at 20℃; > 2 M Ω at 400℃	
Self heating	0.4 K/mW at 0°C	
Response time	water current (v= 0.4 m/s): $t_{0.5} = 0.06s$ $t_{0.9} = 0.20s$	
	air stream (v= 2 m/s): $t_{0.5} = 3.0s$ $t_{0.9} = 13.0s$	
Measuring current	100 Ω : 0.3 to 1.0mA 1000 Ω : 0.1 to 0.3mA (self heating has to be considered)	
Note	Other tolerances, values of resistance and wire lengths are available on request.	



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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box	Order Number Vacuum bag
100 Ohm at 0°C	Class B	F 0.3	32 207 302	32 207 608

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

SpecificationDIN EN 60751 (according to IEC 751)Temperature range -50° C to $+400^{\circ}$ C (continuous operation) Tolerance class B: -50° C to $+400^{\circ}$ CTemperature coefficientTC = 3850 ppm/KLeadsAgPd- wireLead lengths (L)10mm ± 1 mmLong-term stabilitymax. R ₀ -drift 0.04% after 1000h at 400°C depends on installationShock resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments only husulation resistance> 100 M\Omega at 20°C; > 2 M\Omega at 400°CSelf heating0.4 K/mW at 0°C to $= 0.30s$ air stream (v= 2m/s): $t_{0.5} = 0.20s$ to $= 0.30s$ air stream (v= 2m/s): $t_{0.5} = 0.20s$ to $= 9.0s$ Measuring current10002: 0.3 to 1.0mA (self heating has to be considered) 0.25×0.02 NoteOther tolerances, values of resistance and wire lengths are available on request. 0.25×0.02						
Temperature range -50° C to $+400^{\circ}$ C (continuous operation) Tolerance class B: -50° C to $+400^{\circ}$ CTemperature coefficientTC = 3850 ppm/KLeadsAgPd- wireLeadsAgPd- mineLead lengths (L)10mm ±1mmLong-term stabilitymax. Ro-drift 0.04% after 1000h at 400°CVibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 MΩ at 20°C; > 2 MΩ at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to as = 3.0s to as = 3.0s to as = 3.0s to as = 9.0sMeasuring current100Ω: 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Specification	DIN EN 60751 (according to IE	EC 751)			
Temperature coefficientTC = 3850 ppm/KLeadsAgPd- wireLead lengths (L)10mm ±1mmLong-term stabilitymax. R_0 -drift 0.04% after 1000h at 400°CVibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 M\Omega at 20°C; > 2 M\Omega at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to_5 = 3.08 to_9 = 0.308 air stream (v= 2m/s):to_5 = 0.208 to_5 = 3.08 to_9 = 9.05Measuring current100\Omega: 0.3 to 1.0mA (self heating has to be considered)tops = 0.205 to_9 = 0.020NoteOther tolerances, values of resistance and wire lengths are available on request.tops = 0.205 to_9 = 0.020	Temperature range	-50°C to +400°C (continuous of Tolerance class B: -50°C to +4	peration) 00°C			
LeadsAgPd- wireLead lengths (L)10mm \pm 1mmLong-term stabilitymax. R ₀ -drift 0.04% after 1000h at 400°CVibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 MΩ at 20°C; > 2 MΩ at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to s = 0.30s air stream (v= 2m/s):Measuring current100Ω: 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Temperature coefficient	TC = 3850 ppm/K				
Lead lengths (L) $10mm \pm 1mm$ Long-term stabilitymax. R_0 -drift 0.04% after 1000h at 400°CVibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 M\Omega at 20°C; > 2 M\Omega at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to.s = 0.30s air stream (v= 2m/s):to.s = 0.20s to.s = 0.30s to.s = 0.30s to.s = 0.30s to.s = 0.0sMeasuring current100\Omega: 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Leads	AgPd- wire			2:0.2	
Long-term stabilitymax. R_0 -drift 0.04% after 1000h at 400°CVibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 M\Omega at 20°C; > 2 M\Omega at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): $t_{0.5} = 0.20s$ air stream (v= 2m/s): $t_{0.5} = 0.20s$ $t_{0.9} = 9.0s$ Measuring current100 Ω : 0.3 to 1.0mA (self heating has to be considered) $t_{0.25 \pm 0.02}$ NoteOther tolerances, values of resistance and wire lengths are available on request. $t_{0.25 \pm 0.02}$	Lead lengths (L)	10mm ±1mm		N		
Vibration resistanceat least 40g acceleration at 10 to 2000 Hz, depends on installationShock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 M Ω at 20°C; > 2 M Ω at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to.5 = 0.30s air stream (v= 2m/s):to.5 = 0.20s to.5 = 3.0s to.9 = 0.30s do.9 = 9.0sMeasuring current100 Ω : 0.3 to 1.0mA (self heating has to be considered)to.e considered)NoteOther tolerances, values of resistance and wire lengths are available on request.to.e considered	Long-term stability	max. R ₀ -drift 0.04% after 1000	h at 400°C	, 3±0	\$	
Shock resistanceat least 100g acceleration with 8ms half sine wave, depends on installationEnvironmental conditionsunhoused for dry environments onlyInsulation resistance> 100 MΩ at 20°C; > 2 MΩ at 400°CSelf heating 0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): to.5 = 0.30s air stream (v= 2m/s):to.5 = 0.20s to.5 = 0.30s to.9 = 0.30s to.9 = 0.30s to.9 = 0.00sMeasuring current100Ω: 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Vibration resistance	at least 40g acceleration at 10 depends on installation	to 2000 Hz,	~		
Environmental conditionsunhoused for dry environments onlyInsulation resistance> 100 M Ω at 20°C; > 2 M Ω at 400°CSelf heating0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s): $t_{0.5} = 0.20s$ water current (v= 2m/s): $t_{0.5} = 3.0s$ to.9 = 0.30sair stream (v= 2m/s): $t_{0.9} = 9.0s$ Measuring current100 Ω : 0.3 to 1.0mA(self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Shock resistance	at least 100g acceleration with wave, depends on installation	8ms half sine			
Insulation resistance> 100 M\Omega at 20°C; > 2 M\Omega at 400°CSelf heating 0.4 K/mW at 0°CResponse timewater current (v= 0.4m/s):to:s = 0.20sto:s = 0.30sair stream (v= 2m/s): $t_{0.5} = 0.20s$ to:s = 3.0sto:s = 9.0sMeasuring current 100Ω : 0.3 to 1.0mA(self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Environmental conditions	unhoused for dry environments only				
Self heating 0.4 K/mW at 0°C Response timewater current (v= 0.4 m/s): $t_{0.5} = 0.20s$ $t_{0.9} = 0.30s$ air stream (v= 2 m/s): $t_{0.5} = 3.0s$ $t_{0.9} = 9.0s$ Measuring current 100Ω : 0.3 to 1.0 mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Insulation resistance	> 100 M Ω at 20°C; > 2 M Ω at 4	400°C		. 4 ±0	
Response timewater current (v= 0.4m/s): $t_{0.5} = 0.20s$ $t_{0.9} = 0.30s$ $t_{0.9} = 0.30s$ air stream (v= 2m/s): $t_{0.5} = 3.0s$ $t_{0.9} = 9.0s$ $t_{0.9} = 9.0s$ Measuring current 100Ω : 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Self heating	0.4 K/mW at 0°C				
air stream (v= 2m/s): $t_{0.5} = 3.0s$ $t_{0.9} = 9.0s$ Measuring current 100Ω : 0.3 to 1.0mA (self heating has to be considered)NoteOther tolerances, values of resistance and wire lengths are available on request.	Response time	water current (v= 0.4m/s):	$t_{0.5} = 0.20s$ $t_{0.9} = 0.30s$	-		
Measuring current 100Ω: 0.3 to 1.0mA (self heating has to be considered) Note Other tolerances, values of resistance and wire lengths are available on request.		air stream (v= 2m/s):	$t_{0.5} = 3.0s$ $t_{0.9} = 9.0s$			
Note Other tolerances, values of resistance and wire lengths are available on request.	Measuring current	100 Ω : 0.3 to 1.0mA (self heating has to be conside	red)	0,25±0	, 02	
	Note	Other tolerances, values of res wire lengths are available on re	istance and equest.			





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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class A Class B	F 0.15 F 0.3	32 207 583 32 207 440

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

Specification	DIN EN 60751			
Temperature range	-50°C to +400°C (continuou Tolerance Class B: Tolerance Class A:	us operation) 50°C to +400°C 50°C to +300°C		
Temperature coefficient	TC = 3850 ppm/K		1,5±0,2	
Leads	AgPd- wire		ſſ	
Lead lengths (L)	10mm ±1mm			
Long-term stability	Max. R0 drift 0.04% after 1	000h at 400°C		m)
Vibration resistance	at least 40g acceleration at depends on installation	10 to 2000 Hz,	Ī	
Shock resistance	at least 100g 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 400°C		
Self heating	0.4 K/mW at 0°C		Ø0,25±0.02	-
Response time	Water current (v= 0.4m/s):	$t_{0.5} = 0.07s$		
	Air flow (v= 2m/s):	$t_{0.9} = 0.25s$ $t_{0.5} = 3.2s$ $t_{0.9} = 14.0s$		
Measuring current	100 Ω : 0.3 to 1.0mA (self heating has to be cons	sidered)	(
Note	Other tolerances, values of resistance and wire lengths are available on request.			conform



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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class B	F 0.3	32 207 702
500 Ohm at 0°C	Class B	F 0.3	32 207 703
1000 Ohm at 0°C	Class 1/3 B Class A Class B	F 0.1 F 0.15 F 0.3	32 207 587 32 207 582 32 207 704

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

Specification	DIN EN 60751 (according	g to IEC 751)		
Temperature range	-50°C to + 400°C (contin Tolerance Class B: Tolerance Class A: Tolerance Class 1/3 B:	uous operation) -50°C to +400°C -50°C to +300°C 0°C to +150°C	2:0,2	
Temperature coefficient	TC = 3850 ppm/K			
Leads	AgPd- wire			0 4 6 ·
Lead lengths (L)	10mm ±1mm			
Long-term stability	max. R0-drift 0.04% after	r 1000h at 400°C		
Vibration resistance	at least 40g acceleration depends on installation	at 10 to 2000 Hz,		
Shock resistance	at least 100g acceleration half sine wave, depends	n with 8ms on installation		
Environmental conditions	unhoused for dry environ	iments only	40.25.4	ų i
Insulation resistance	> 100 M Ω at 20°C; > 2 M	1Ω at 500°C	ØU,25:0,02	-
Self heating	0.3 K/mW at 0°C			
Response time	water current (v= 0.4m/s)): $t_{0.5} = 0.08s$	G	
	air stream (v= 2m/s):	$t_{0.9} = 0.23s$ $t_{0.5} = 3.5s$ $t_{0.9} = 15.0s$	i c	onform
Measuring current	100Ω: 0.3 bis 1.0 mA 500Ω: 0.1 bis 0.7 mA 1000Ω: 0.1 bis 0.3 mA (self heating has to be co	onsidered)		
Note	Other tolerances, values wire lengths are available	of resistance and e on request.		



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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Box
100 Ohm at 0°C	Class 1/3 B	F 0,1	32 207 585
	Class A	F 0,15	32 207 579
	Class B	F 0,3	32 207 708
1000 Ohm at 0°C	Class 1/3 B	F 0,1	32 207 586
	Class A	F 0,15	32 207 581
	Class B	F 0,3	32 207 710

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

Specification	DIN EN 60751 (according to IE	C 751)		
Temperature range	-50°C to +400°C (continuous o Tolerance Class B: Tolerance Class A: Tolerance Class 1/3B:	peration) -50°C to +400°C -50°C to +300°C 0°C to +150°C	1,9:0.2	
Temperature coefficient	TC = 3850 ppm/K		0000	
Leads	AgPd- wire	HE		
Lead lengths (L)	10mm ±1mm	11/2		
Long- term stability	max. R ₀ -drift 0.04% after 1000	n at 400 °C		0*0,15
Vibration resistance	at least 40g acceleration at 10 depends on installation	to 2000 Hz,		o
Shock resistance	at least 100g acceleration with depends on installation	8ms half sine wave,		
Environmental conditions	unhoused for dry environments	only		
Insulation resistance	> 100 MΩ at 20°C; > 2 MΩ at 4	00°C		
Self heating	0.2 K/mW at 0°C		i i	
Response time	water current (v = 0.4m/s):	$t_{0.5} = 0.12s$ $t_{0.6} = 0.30s$		
	air stream (v = 2m/s):	$t_{0.5} = 6.0s$ $t_{0.9} = 20.0s$	Ø0,25±0.02	
Measuring current	100Ω: 0.3 to 1.0mA 1000Ω: 0.1 to 0.3mA (self heating has to be conside	red)		
Note	Other tolerances, values of res lengths are available on request	istance and wire st.	RoH	S m



Platinum Resistance Temperature Detector

LN 222

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 R0	Tolerance DIN EN 60751 1996-07	Tolerance DIN EN 60751 2009-05	Order Number Plastic Bag
100 Ohm at 0℃	Class A	F 0,15	32 207 771
	Class B	F 0,3	32 207 770
1000 Ohm at 0℃	Class A	F 0,15	32 207 773
	Class B	F 0,3	32 207 772

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

Specification	DIN EN 60751 (according	g to IEC 751)		
Temperature range	-50°C to +400°C (continuc Tolerance Class B: Tolerance Class A:	ous operation) -50℃ to +400℃ -50℃ to +300℃	1 1	1.1
Temperature coefficient	TCR = 3850 ppm/K		2,1±0,2	- 0,9 <u>*</u> 8; <u>3</u>
Leads	Ni- silvercoated Recommend connection Soft soldering and Crimpi	technology:		2, 30.2 10.2 10.2
Lead lengths (L)	10mm ±1mm			
Vibration resistance	at least 40g acceleration at 10 to 2000 Hz, depends on installation			
Shock resistance	at least 100g acceleration with 8ms half sine wave, depends on installation			
Environmental conditions	unhoused for dry environ	ments only		<u> </u>
Insulation resistance	> 100 MΩ at 20℃; > 2 M	Ω at 400℃	\$0,22 \$0,02	
Self heating	0.4 K/mW at 0℃			
Response time	water current (v= 0.4m/s)	: $t_{0.5} = 0.05s$	_	
	air stream (v= 2m/s):	$t_{0.9} = 0.15S$ $t_{0.5} = 3.0S$ $t_{0.9} = 10.0S$	Ro	HS form
Measuring current	100Ω : 0.3 to 1.0mA 1000Ω: 0.1 to 0.3mA (self heating has to be co	nsidered)		
Note	Other tolerances, values lengths are available on r	of resistance and wire equest.		

