



PLATFORM OF RAILWAY TEMPERATURE SENSOR

Product description

High temperature Pt sensor which used to monitor the temperature value of motor.

Features

- Temperature range:
Probe head area: -50 to 250°C
Cable area: -40 to 120°C
- Sensor element:
Type: Pt100 or Pt1000,
Accuracy: CL.A, CL.B, CL.C @ -50 to 250°C
- Response time:
 - Ø4 sus tube: $\tau_{0.5} \leq 4s$ or $\tau_{0.9} \leq 10s$
 - Ø5 sus tube: $\tau_{0.5} \leq 7s$ or $\tau_{0.9} \leq 14s$
 - Ø6 sus tube: $\tau_{0.5} \leq 7s$ or $\tau_{0.9} \leq 19s$
- High voltage resistance at room temp:
2500VAC, 50HZ, 60s, 1mA MAX
- Insulation resistance at room temp:
>=200MΩ @ 500VDC
- Protection level: IP68 (Sensor head)
- Neutral salt spray, 48hrs (Sensor head)
- Vibration and shock resistance : EN 61373 type 3
- Fireproof: EN45545-2 (cable, corrugated conduit)
- Shielded
- Pt Temperature Sensor
- Pt Conform to DIN EN 60751
- Wide Temperature Range
- Fast Response Time
- Compliant with ISO/TS 22163
- EN 45545-2 Fire Protection
- Robust Structure
- Excellent Stability and Reliability

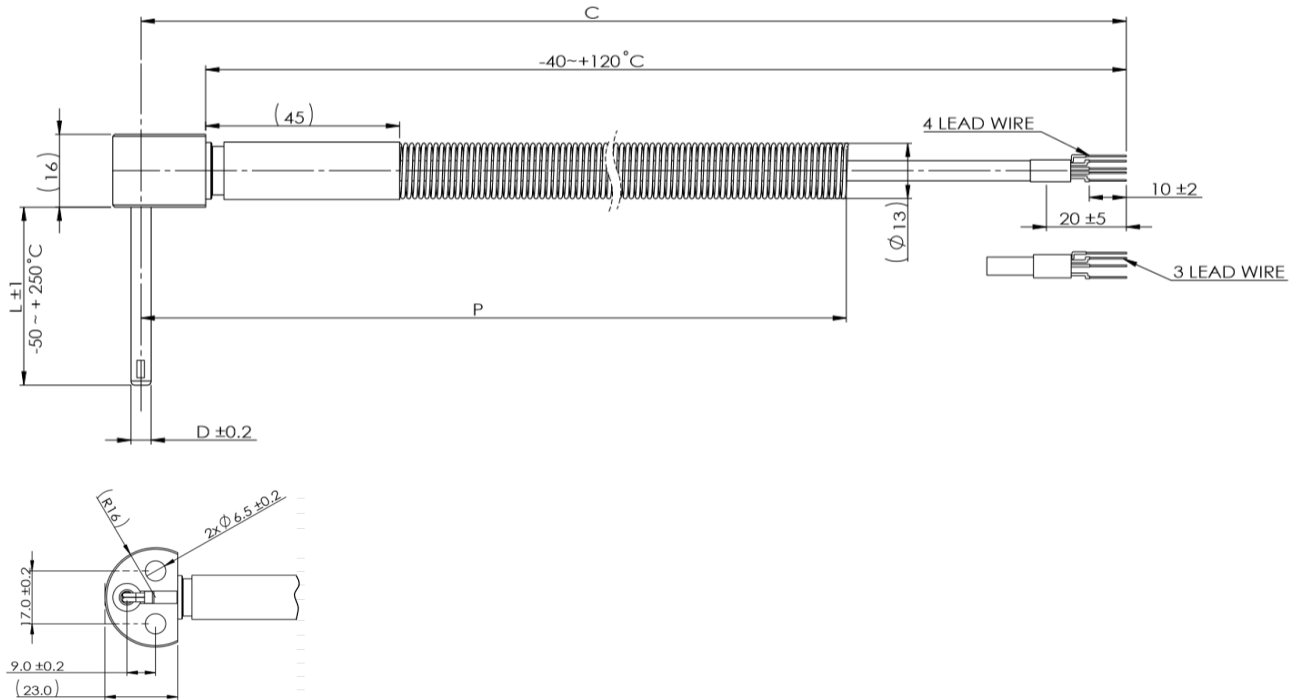
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PLATFORM OF RAILWAY TEMPERATURE SENSOR

Application

- Railway
- Industrial

Mechanical details



STOCKED PART NUMBERS

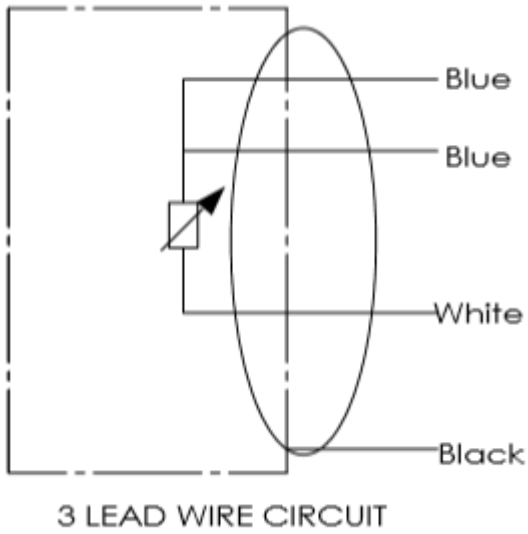
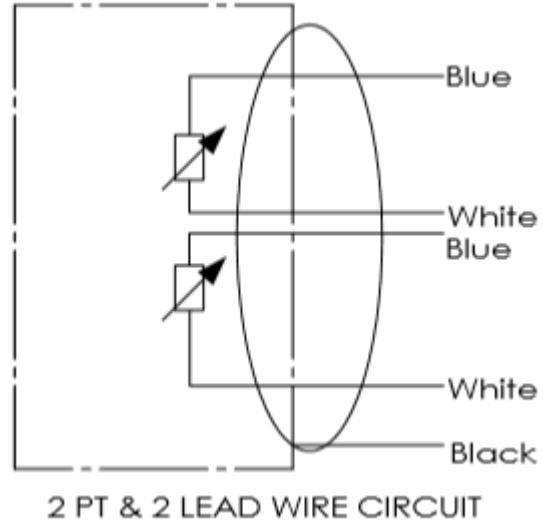
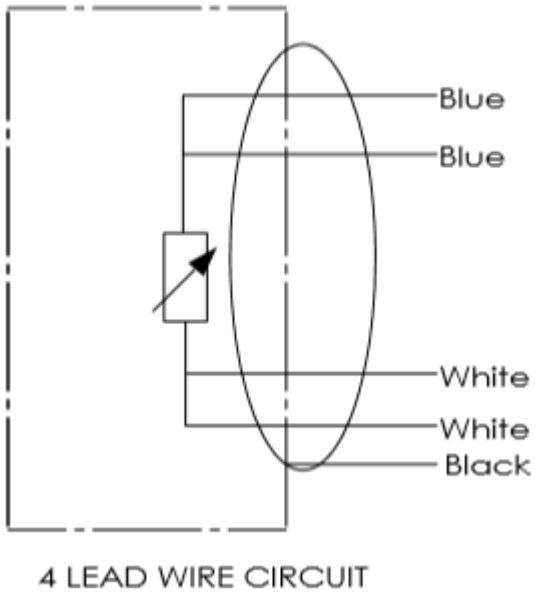
PART NUMBER	MODEL NUMBER
20016233-00	D4 L100 W4 P1A1 C3 P27
20016233-01	D5 L130 W4 P1A1 C3 P27
20016233-02	D6 L150 W4 P1A1 C3 P27
20016233-03	D5 L130 W2 P1A2 C3 P27
20016233-04	D6 L150 W2 P1A2 C3 P27
20016233-05	D4 L100 W3 P1A1 C3 P27
20016233-06	D5 L130 W3 P1A1 C3 P27
20016233-07	D6 L150 W3 P1A1 C3 P27

MODEL NUMBER CONFIGURATION INFORMATION

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Description	Diameter of SUS tube	Value (mm)	Length of SUS tube	Value (mm)		Wire	Quantity of lead wire	Platinum element	100X (Ohm)	Class of chip	Quantity of chip	Length of cable	Value (1000X mm)	Length of tube	Value (100X mm)		
Range of select	/	4	/	20~100		/	2,3,4	/	1,5,10	A,B,C	1,2	/	X ≤ 1; ±30 1 < X < 5; ±50	/	X ≤ 10; ±30 10 < X < 47; ±50		
Parameter	D	X	L	X	X	X	W	X	P	X	X	X	C	X	P	X	X
example:20016233-00	D	4	L	1	0	0	W	4	P	1	A	1	C	3	P	2	7

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Electronic Details



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Relation Temperature VS Resistance

Pt1000=Pt100X10 (The Following is Pt100 Table)

°C	0	1	2	3	4	5	6	7	8	9	°C
-200	18.52										-200
-190	22.83	22.4	21.97	21.54	21.11	20.68	20.25	19.82	19.38	18.95	-190
-180	27.1	26.67	26.24	25.82	25.39	24.97	24.54	24.11	23.68	23.25	-180
-170	31.34	30.91	30.49	30.07	29.64	29.22	28.8	28.37	27.95	27.52	-170
-160	35.54	35.12	34.7	34.28	33.86	33.44	33.02	32.6	32.18	31.76	-160
-150	39.72	39.31	38.89	38.47	38.05	37.64	37.22	36.8	36.38	35.96	-150
-140	43.88	43.46	43.05	42.63	42.22	41.8	41.39	40.97	40.56	40.14	-140
-130	48	47.59	47.18	46.77	46.36	45.94	45.53	45.12	44.7	44.29	-130
-120	52.11	51.7	51.29	50.88	50.47	50.06	49.65	49.24	48.83	48.42	-120
-110	56.19	55.79	55.38	54.97	54.56	54.15	53.75	53.34	52.93	52.52	-110
-100	60.26	59.85	59.44	59.04	58.63	58.23	57.82	57.41	57.01	56.6	-100
-90	64.3	63.9	63.49	63.09	62.68	62.28	61.88	61.47	61.07	60.66	-90
-80	68.33	67.92	67.52	67.12	66.72	66.31	65.91	65.51	65.11	64.7	-80
-70	72.33	71.93	71.53	71.13	70.73	70.33	69.93	69.53	69.13	68.73	-70
-60	76.33	75.93	75.53	75.13	74.73	74.33	73.93	73.53	73.13	72.73	-60
-50	80.31	79.91	79.51	79.11	78.72	78.32	77.92	77.52	77.12	76.73	-50
-40	84.27	83.87	83.48	83.08	82.69	82.29	81.89	81.5	81.1	80.7	-40
-30	88.22	87.83	87.43	87.04	86.64	86.25	85.85	85.46	85.06	84.67	-30
-20	92.16	91.77	91.37	90.98	90.59	90.19	89.8	89.4	89.01	88.62	-20
-10	96.09	95.69	95.3	94.91	94.52	94.12	93.73	93.34	92.95	92.55	-10
0	100	99.61	99.22	98.83	98.44	98.04	97.65	97.26	96.87	96.48	0
0	100	100.39	100.78	101.17	101.56	101.95	102.34	102.73	103.12	103.51	0
10	103.9	104.29	104.68	105.07	105.46	105.85	106.24	106.63	107.02	107.4	10
20	107.79	108.18	108.57	108.96	109.35	109.73	110.12	110.51	110.9	111.29	20
30	111.67	112.06	112.45	112.83	113.22	113.61	114	114.38	114.77	115.15	30
40	115.54	115.93	116.31	116.7	117.08	117.47	117.86	118.24	118.63	119.01	40
50	119.4	119.78	120.17	120.55	120.94	121.32	121.71	122.09	122.47	122.86	50
60	123.24	123.63	124.01	124.39	124.78	125.16	125.54	125.93	126.31	126.69	60
70	127.08	127.46	127.84	128.22	128.61	128.99	129.37	129.75	130.13	130.52	70
80	130.9	131.28	131.66	132.04	132.42	132.8	133.18	133.57	133.95	134.33	80
90	134.71	135.09	135.47	135.85	136.23	136.61	136.99	137.37	137.75	138.13	90
100	138.51	138.88	139.26	139.64	140.02	140.4	140.78	141.16	141.54	141.91	100
110	142.29	142.67	143.05	143.43	143.8	144.18	144.56	144.94	145.31	145.69	110
120	146.07	146.44	146.82	147.2	147.57	147.95	148.33	148.7	149.08	149.46	120
130	149.83	150.21	150.58	150.96	151.33	151.71	152.08	152.46	152.83	153.21	130
140	153.58	153.96	154.33	154.71	155.08	155.46	155.83	156.2	156.58	156.95	140
150	157.33	157.7	158.07	158.45	158.82	159.19	159.56	159.94	160.31	160.68	150
160	161.05	161.43	161.8	162.17	162.54	162.91	163.29	163.66	164.03	164.4	160

PLATFORM OF RAILWAY TEMPERATURE SENSOR

Relation Temperature VS Resistance (Cont.)

Pt1000=Pt100X10 (The Following is Pt100 Table)

°C	0	1	2	3	4	5	6	7	8	9	°C
170	164.77	165.14	165.51	165.89	166.26	166.63	167	167.37	167.74	168.11	170
180	168.48	168.85	169.22	169.59	169.96	170.33	170.7	171.07	171.43	171.8	180
190	172.17	172.54	172.91	173.28	173.65	174.02	174.38	174.75	175.12	175.49	190
200	175.86	176.22	176.59	176.96	177.33	177.69	178.06	178.43	178.79	179.16	200
210	179.53	179.89	180.26	180.63	180.99	181.36	181.72	182.09	182.46	182.82	210
220	183.19	183.55	183.92	184.28	184.65	185.01	185.38	185.74	186.11	186.47	220
230	186.84	187.2	187.56	187.93	188.29	188.66	189.02	189.38	189.75	190.11	230
240	190.47	190.84	191.2	191.56	191.92	192.29	192.65	193.01	193.37	193.74	240
250	194.1	194.46	194.82	195.18	195.55	195.91	196.27	196.63	196.99	197.35	250
260	197.71	198.07	198.43	198.79	199.15	199.51	199.87	200.23	200.59	200.95	260
270	201.31	201.67	202.03	202.39	202.75	203.11	203.47	203.83	204.19	204.55	270
280	204.9	205.26	205.62	205.98	206.34	206.7	207.05	207.41	207.77	208.13	280
290	208.48	208.84	209.2	209.56	209.91	210.27	210.63	210.98	211.34	211.7	290
300	212.05	212.41	212.76	213.12	213.48	213.83	214.19	214.54	214.9	215.25	300

Ordering Information

Item	TE PN	Description
1	20016233-00	railway platform D4, L100, W4, P1A1, C3, P27
2	20016233-01	railway platform D5, L130, W4, P1A1, C3, P27
3	20016233-02	railway platform D6, L150, W4, P1A1, C3, P27
4	20016233-03	railway platform D5, L130, W2, P1A2, C3, P27
5	20016233-04	railway platform D6, L150, W2, P1A2, C3, P27
6	20016233-05	railway platform D4, L100, W3, P1A1, C3, P27
7	20016233-06	railway platform D5, L130, W3, P1A1, C3, P27
8	20016233-07	railway platform D6, L150, W3, P1A1, C3, P27
9	Ordering According to Model Number Configuration Information

History:

Rev: A----Initial Release 10/2020

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