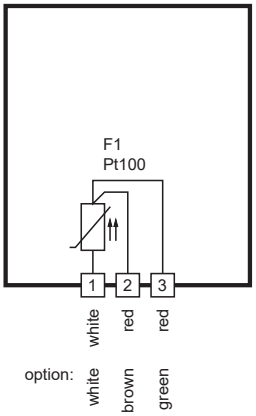
Temperature sensor

Order no: 900001.030

As of: 23.06.2023

Wiring diagram



Product description

The Pt100 temperature sensor is soldered to the cable and electrically insulated in the sleeve. The sleeve is rolled watertight for strain relief. The sleeve material of the sensor is V4A (food-safe).

Several screw connections in V4A or brass are available for mounting the sensor.

Measuring range:	-35...105 °C
Cable length:	12 m
Cable material:	PVC-HT
Sleeve:	6x50 mm
Tightness:	IP64
Accuracy:	Klasse B

Resistance thermometer

Base values Pt100

Platinum resistance thermometer Pt100 DIN 43760

Application range: -220 °C bis +750 °C
Average nominal temperature value: 0.00385/°C

°C	0	-10	-20	-30	-40	-50	-60	-70	-80	-90	-100
-200	18.53	14.36	10.41								
-100	60.20	56.13	52.04	47.93	43.80	39.65	35.48	31.28	27.05	22.78	18.53
0	100.00	96.07	92.13	88.17	84.21	80.25	76.28	72.29	68.28	64.25	60.20
°C	0	+10	+20	+30	+40	+50	+60	+70	+80	+90	+100
0	100.00	103.90	107.79	111.67	115.54	119.40	123.24	127.07	130.89	134.70	138.50
+100	138.50	142.28	146.06	149.82	153.57	157.32	161.04	164.76	168.47	172.16	175.84
+200	175.84	179.51	183.17	186.82	190.46	194.08	197.70	201.30	204.88	208.46	212.03
+300	212.03	215.58	219.13	222.66	226.18	229.69	233.19	236.67	240.15	243.61	247.06
+400	247.06	250.50	253.93	257.34	260.75	264.14	267.52	270.89	274.25	277.60	280.93
+500	280.93	284.26	287.57	290.87	294.16	297.43	300.70	303.95	307.20	310.43	313.65
+600	313.65	316.86	320.05	323.24	326.41	329.57	332.72	335.86	338.99	342.10	345.21
+700	345.21	348.30	351.38	354.45	357.51	360.55	363.59	366.61	369.62	372.62	375.61
+800	375.61	378.59	381.55	384.50	387.45	390.38					

Deviations for Pt100 measuring resistors:

Class A			Class B	
°C	± Ohm	± °C	± Ohm	± °C
-200	0.24	0.55	0.56	1.30
-100	0.14	0.35	0.32	0.80
-60	0.11	0.27	0.24	0.60
0	0.06	0.15	0.12	0.30
+100	0.13	0.35	0.30	0.80
+180	0.19	0.51	0.44	1.20
+200	0.20	0.55	0.48	1.30
+300	0.27	0.75	0.64	1.80
+400	0.33	0.95	0.79	2.30
+500	0.38	1.15	0.93	2.80
+600	0.43	1.35	1.06	3.30
+650	0.46	1.45	1.13	3.55
+700			1.17	3.80
+800			1.28	4.30
+850			1.34	4.55

Tolerances in °C:

for class A: = ± (0.15 + 0.002*t)
for class B: = ± (0.30 + 0.005*t)
(t = temperature in °C)

Base values for measuring resistors with other nominal resistances (e.g. Pt500):

0°C = 100.00 x 5 = 500.00 Ohm
100°C = 138.50 x 5 = 692.50 Ohm
200°C = 175.84 x 5 = 879.20 Ohm

The base values for measuring resistors with other nominal resistances are to be determined correspondingly.

(e.g. for nominal resistance 1000 the factor is 10)

Dimensions: