



ROTS-N-P

Room temperature sensor

The ROTS-N passive temperature probes feature outstanding stability of the temperature characteristics due to the platinum sensor element used. They have a positive temperature coefficient of resistance: when the temperature rises, the resistance rises. The sensor element is soldered on a printed circuit board and is mounted in a plastic housing. It is designed to be connected with shielded cable, grounded on the other side of the line.

Key features

- Low profile housing with covered screws
- Positive temperature coefficient
- Connection for shielded cables
- Long-term stability

Technical specifications

Long-term stability	$< \pm 0,04 \%$	
Insulation resistance	$> 10 \text{ M}\Omega$	
Cable cross section	1,5 mm ²	
Protection standard	IP30	
Ambient conditions	Temperature	-20—60 °C
	Rel. humidity	$< 95 \%$ rH (non-condensing)

Article codes

	ROTS-N-P100	ROTS-N-P500	ROTSP1K0
Resistance at 0 °C	100 Ω	500 Ω	1,000 Ω
Measurement current (DC)	0,1—1,0 mA	0,1—0,40 mA	0,1—0,25 mA
Self-heating	$\leq 0,8 \text{ K/mW}$	$\leq 0,8 \text{ K/mW}$	$\leq 0,7 \text{ K/mW}$
Thermal response time flowing water	$t_{0,5} \leq 0,2 \text{ s}$ $t_{0,9} \leq 0,3 \text{ s}$	$t_{0,5} \leq 0,2 \text{ s}$ $t_{0,9} \leq 0,3 \text{ s}$	$t_{0,5} \leq 0,3 \text{ s}$ $t_{0,9} \leq 0,4 \text{ s}$
	$t_{0,5} \leq 1,5 \text{ s}$ $t_{0,9} \leq 8,0 \text{ s}$	$t_{0,5} \leq 1,5 \text{ s}$ $t_{0,9} \leq 8,0 \text{ s}$	$t_{0,5} \leq 0,3 \text{ s}$ $t_{0,9} \leq 0,4 \text{ s}$

Area of use

- HVAC applications for temperature measurements

Wiring and connections

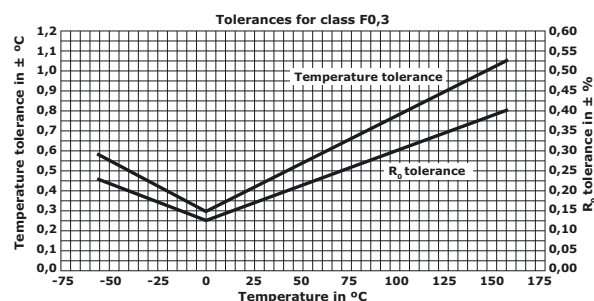
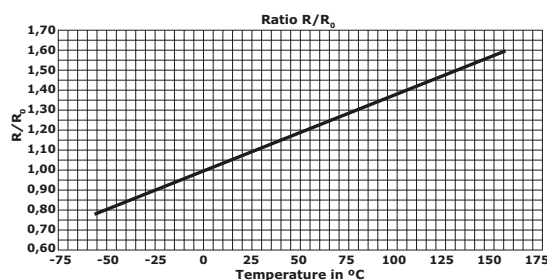
T1	Temperature sensor pin 1
T2	Temperature sensor pin 2
SH	Cable shield connection
Connections	Cable cross section: 1,5 mm ²

Standards

- Low Voltage Directive 2006/95/EC
- DIN / IEC 60751
- WEEE Directive 2012/19/EU
- RoHS Directive 2011/65/EU



Resistance and tolerance values



Temp. °C	R/R ₀ ratio	Nominal resistance values			Class F0.3 T _{tol} °C
		R ₀ 100 Ω	R ₀ 500 Ω	R ₀ 1000 Ω	
-20	0,92160	92,16	460,80	921,60	± 0,40
-15	0,94124	94,12	470,62	941,24	± 0,38
-10	0,96086	96,09	480,43	960,86	± 0,35
-5	0,98044	98,04	490,22	980,44	± 0,33
0	1,00000	100,0	500,00	1000,00	± 0,30
5	1,01953	101,95	509,76	1019,53	± 0,33
10	1,03903	103,90	519,51	1039,03	± 0,35
15	1,05849	105,85	529,25	1058,49	± 0,38
20	1,07794	107,79	538,97	1077,94	± 0,40
25	1,09735	109,73	548,67	1097,35	± 0,43
30	1,11673	111,67	558,36	1116,73	± 0,45
35	1,13608	113,61	568,04	1136,08	± 0,48
40	1,15541	115,54	577,70	1155,41	± 0,50
45	1,17470	117,47	587,35	1174,70	± 0,53
50	1,19397	119,40	596,99	1193,97	± 0,55
55	1,21321	121,32	606,60	1213,21	± 0,58
60	1,23242	123,24	616,21	1232,42	± 0,60



ROTSN-P

Room temperature sensor

Combine with

Logic controllers, switches, timers, potentiometers, converters & relay modules

- DTA series
- DTAP series
- MCS series

Electronic fan speed control

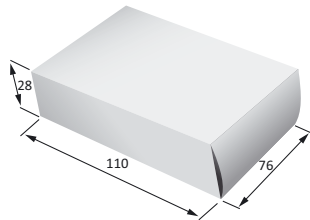
- GTE
- TC1S
- TC2S
- TE1S
- TE2S

Transformer controllers

- GTT

For more detailed information about the product series features visit:
<http://www.sentera.eu/english/download-catalogue.html>

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
ROTSN-P100	Unit (1 pc.)	110	76	28	0,54 kg	0,72 kg
	Carton (24 pcs.)	492	182	84	1,30 kg	1,86 kg
	Box (144 pcs.)	514	414	274	7,78 kg	12,13 kg
ROTSN-P500	Unit (1 pc.)	110	76	28	0,54 kg	0,72 kg
	Carton (24 pcs.)	492	182	84	1,30 kg	1,86 kg
	Box (144 pcs.)	514	414	274	7,78 kg	12,13 kg
ROTSN-P1K0	Unit (1 pc.)	110	76	28	0,54 kg	0,72 kg
	Carton (24 pcs.)	492	182	84	1,30 kg	1,86 kg
	Box (144 pcs.)	514	414	274	7,78 kg	12,13 kg

Fixing and dimensions

