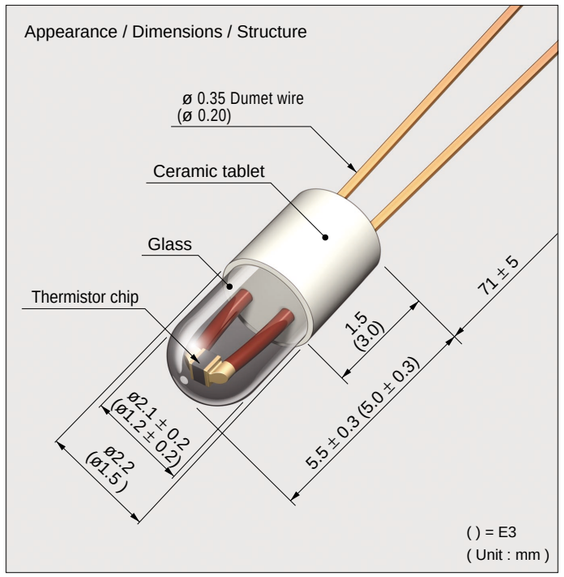
NS II THERMISTOR

A thermistor for temperature measurements in wet environment

The NSII is a thermistor that mechanically reinforces, with a ceramic tablet, the outlet of the lead wire in a glass-sealed thermistor and so has remarkably elevated the electrical insulation and mechanical strength. In particular, it is suitable for use in places with much humidity.



Features

- The creepage distance between the lead wires has been made long in the ceramic tablet, so there is excellent moisture-resistance.
- The strength of the outlet of the lead wire has been increased, so the glass seal does not break or crack due to forming and resin injections during sensor processing

Applications

The NSII is suitable for temperature detection in the following equipment that is used in places with a high humidity.

- For temperature control in oil and gas boilers
- Temperature sensors that require moisture-resistance and mechanical strength for water heaters, dish dryers, clothes dryers, bidets, automobile coolants and engine oils

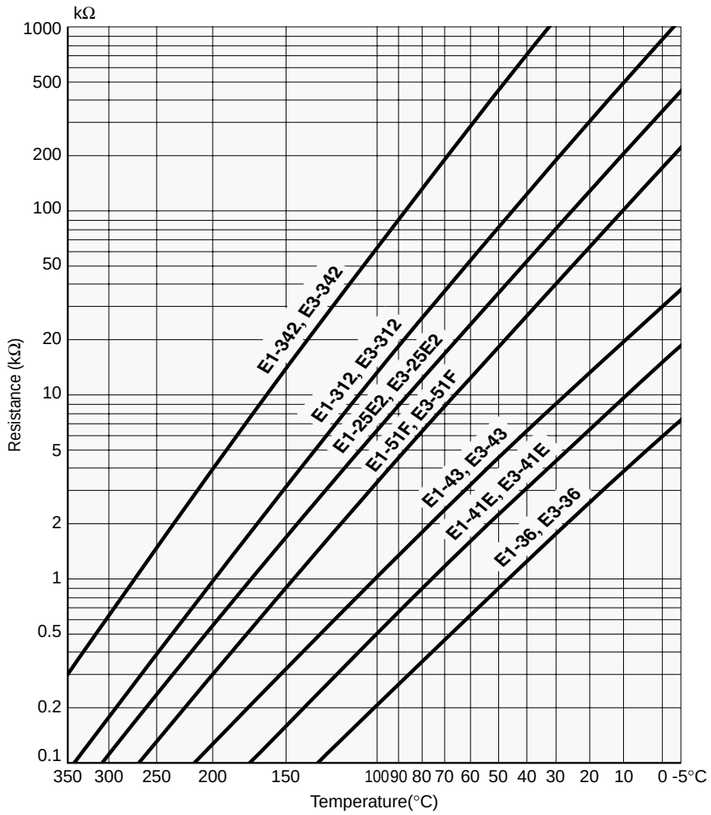
Rated Values

	E1	E3
Highest operating temperature :	300°C	300°C
Thermal time constant τ :	Approx. 18 sec	Approx. 10 sec
Dissipation constant δ :	Approx. 1.5mW/°C	Approx. 1.2mW/°C
Insulation resistance :	Min. 100MΩ (500V d.c.)	Min. 10MΩ (50V d.c.)

Product name		Nominal resistance value note (1)	B constant	
E1-36	E3-36	6 kΩ (0°C)	3420K ± 68K (25 ~ 85°C)	3390K ± 2% (0 ~ 100°C)
E1-41E	E3-41E	15 kΩ (0°C)	3480K ± 69K (25 ~ 85°C)	3450K ± 2% (0 ~ 100°C)
E1-43	E3-43	30 kΩ (0°C)	3480K ± 69K (25 ~ 85°C)	3450K ± 2% (0 ~ 100°C)
E1-51F	E3-51F	3.3 kΩ (100°C)	3992K ± 79K (25 ~ 85°C)	3970K ± 2% (0 ~ 100°C)
E1-25E2	E3-25E2	0.55 kΩ (200°C)	4066K ± 129K (25 ~ 85°C)	4300K ± 3% (100 ~ 200°C)
E1-312	E3-312	1 kΩ (200°C)	4240K ± 136K (25 ~ 85°C)	4537K ± 3% (100 ~ 200°C)
E1-342	E3-342	4 kΩ (200°C)	4557K ± 154K (25 ~ 85°C)	5133K ± 3% (200 ~ 300°C)

Note (1): Resistance value tolerance: ± 2.5%, ± 5%, ± 10%

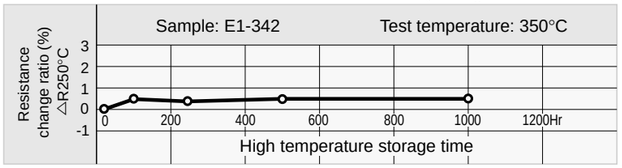
Resistance - Temperature Characteristics



Reliability Data

(average value of n = 10)

- Heat resistance test



(average value of n = 10)

- Damp heat test