Thermistors

Applications

- Monitoring temperature in geothermal energy systems
- Monitoring temperature profiles in geothermal loops

Features

- Fast Response
- High accuracy
- Excellent long-term stability
- Operating range -50 to 150°C
- Waterproof to IP68 (16 bar)

Thermistor strings provide accurate and reliable long-term temperature measurements.

A series of sensors mounted along a multi-core cable provide a temperature profile. They are manufactured to customer requirements in terms of the number and spacing of each sensor.

The NTC (negative temperature coefficient) thermistor sensor has a resistance that decreases with increasing temperature and a coefficient >4%/°C allows it to detect very small changes in temperature.

The NTC (negative temperature coefficient) thermistor sensor has a resistance that decreases with increasing temperature and with a coefficient >4%/°C allows it to detect very small changes in temperature. They have a non-linear output that is represented by the Steinhart–Hart equation.

$$T = (1 / (A + B (LnR) + C(LnR) 3)) - 273.2$$

Where: T = Temperature in degrees Centigrade
LnR= Natural log of Thermistor resistance in ohms

Readings can be made with a wide range of readout units or by an ohmmeter in combination with look-up tables. Readings can also be automated using an automatic data acquisition unit.

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Specifications may change without prior notice

Thermistors

Specifications

PROBE

Model	TP-1
Temperature range*	-50 to +150 °C
Accuracy	± 0.2 °C
Resolution**	0.1 °C
Housing	PVC
Housing diameter (mm)	31
Housing length (mm)	85
Cable (mm)	4 core PUR

STRINGS

Model	TS-1	TS-2	TS-3	TS-4	TS-5	TS-6
Temperature range*	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C	-50 to +150 °C
Accuracy	± 0.2 °C	± 0.2 °C	± 0.2 °C	± 0.2 °C	± 0.2 °C	± 0.2 °C
Resolution**	0.1 °C	0.1 °C	0.1 °C	0.1 °C	0.1 °C	0.1 °C
Points	1-2	3-4	5-7	8-10	11-15	16-25
Cable diameter	7	8.9	9.8	11.4	12.5	14.8
Housing diameter (mm)	19, 31	19, 31	31	31	31	31
Housing length (mm)	85	85	85	85	85	85
Cable	Single: Type 900 - VW Sensor with Foil Screen & Drain Wire String Type 910 - Multi-Core with Foil Screen & Drain Wire					

ORDERING INFORMATION

Number of points
Spacing of points
Cable length
Cable termination enclosures
Readout and data logger
* Other ranges available on request
** Readout dependent

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