

Overmoulded Probe

Introduction

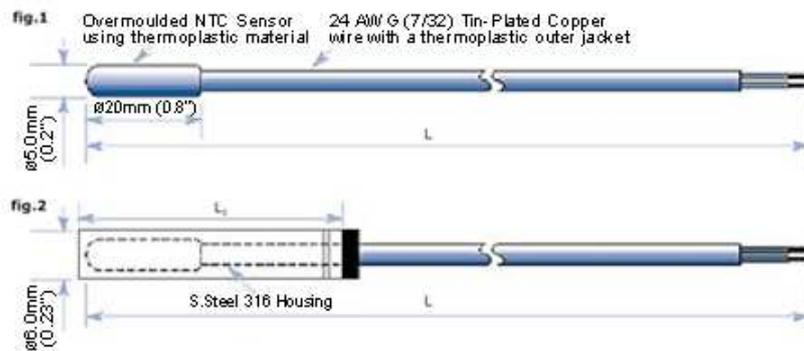
BetaTHERM's overmoulded thermistor probe is developed for demanding HVAC & Refrigeration applications. It is ideal for harsh environments where accurate temperature sensing or control is required for freeze-thaw conditions.

The probe is available in a range of standardized tolerances and curves, optional stainless steel housing for additional mechanical protection or made to meet your customized electrical, housing and lead length requirements.

Reliability Testing

BetaTHERM has conducted freeze/thaw thermal cycling on the overmolded temperature probe. The thermal cycle testing involved freezing the probe head in conjunction with water-spray to expose the probe to 'ice-crush' conditions. The temperature of the probe is then rapidly elevated using a hot air-stream that thaws the ice around the probe head. The total thermal cycle time involved is 30 minutes. The probes have been tested to 20,000 cycles under these extreme conditions.

Shape and Dimensions



Features

- Degree of Protection: Water proof to IP68 (International Protection Rating 68)
- Insulation Resistance: 100MΩ @ 500 VDC
- Uniformity (interchangeability)
- Operating Temperature: -50°C to +105°C.
- Tested to 20,000 freeze/thaw thermal cycles (ice-crush conditions)
- Customized tolerances and resistances available from -20°C to +105°C.
- Time response in water: 7 seconds (10 seconds with S.Steel housing)
- Cable: VDE Approved

Applications

- Refrigeration applications (including evaporator-coil, case refrigeration.
- Under floor heating
- Climate Control systems.
- Domestic water systems
- Building Management systems
- Swimming pools
- Saunas
- Oceanographic applications
- Industrial Process Control

Electrical Specifications

Part Number* (Excl.S.Steel Hsg.)	Part Number* (Incl.S.Steel Hsg.)	Resistance @ +25.C	Beta Value	Resistance Tolerances @ +25.C **	L**	L ₁
2K3348M001	2K3348SSM001	2,000	3348	± 1%	1,000mm (40")	50mm (2")
2K3499M002	2K3499SSM002	2,000	3499	± 1%	1,000mm (40")	50mm (2")
5K3976M003	5K3976SSM003	5,000	3976	± 1%	1,000mm (40")	50mm (2")
10K3435M004	10K3435SSM004	10,000	3435	± 1%	1,000mm (40")	50mm (2")
10K3694M005	10K3694SSM005	10,000	3694	± 1%	1,000mm (40")	50mm (2")
10K3976M006	10K3976SSM006	10,000	3976	± 1%	1,000mm (40")	50mm (2")
30K3942M007	30K3942SSM007	30,000	3942	± 1%	1,000mm (40")	50mm (2")
50K3976M008	50K3976SSM008	50,000	3976	± 1%	1,000mm (40")	50mm (2")

100K4000M009	100K4000SSM009	100,000	4000	± 1%	1,000mm (40")	50mm (2")
200K4261M010	200K4261SSM010	200,000	4261	± 1%	1,000mm (40")	50mm (2")
500K4261M011	500K4261SSM011	500,000	4261	± 1%	1,000mm (40")	50mm (2")

*R/T Tables are available from Betatherm for the mentioned part numbers.

**Custom tolerances and cable lengths available.

Alternative Constructions

For specific applications, other temperature sensor types can be supplied in this probe assembly e.g. PT 100 & PT 1000 (RTD 's). A detachable probe head can also be fitted. Please contact Betatherm regarding these solutions.

For details on the minimum order quantity (MOQ) of this product, please contact BetaTHERM or your local BetaTHERM representative.



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