THERMOMETRICS
A COMMITMENT TO EXCELLENCE

Self-Adhering Surface Temperature Sensors



Thermometrics range of Self-Adhering Surface Temperature Sensors are designed for industrial HVACR applications, typically for placement on the external wall of a water tank or boiler reservoirs. They are also suitable for reservoir tanks working in conjunction with solar panel water heating systems. This range of adhesive pad sensors detect over-temperature resulting from a malfunction or a dry-fire.

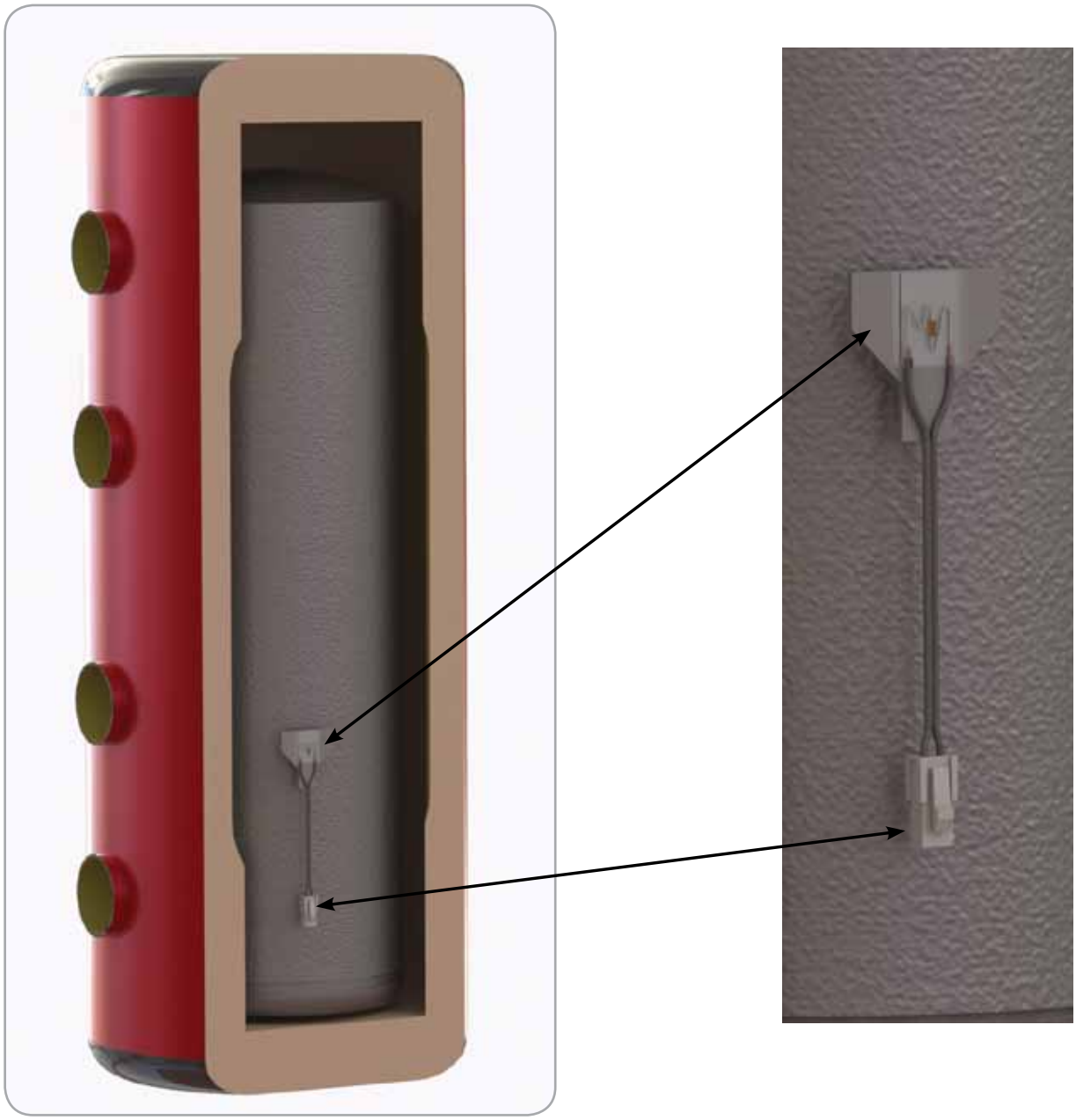
Pressure sensitive adhesive tapes loaded with ceramic powders provide high thermal conductivity and thus excellent heat transfer from the heat source to a NTC thermistor while maintaining appropriate levels of dielectric strength. An adhesive lined foam backing tape provides air and moisture resistance with optional WRC (5470) water safety and DIN 4102 part 1 (B3) fire safety approvals.

Features

- Excellent heat transfer
- Long-term stability
- Multiple adhesive tape sizes and shapes available
- Various lengths
- Temperature ranges from -30 to +70 °C.
- PVC single insulated lead wire, 3x1.5mm cross-sectional profile.
- Voltage withstand: 750 Vac between the terminals of the connector and the contact tape, for a broadly sinusoidal wave form at 50 Hz, where the max permissible current is 1 mA.

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Product Applications

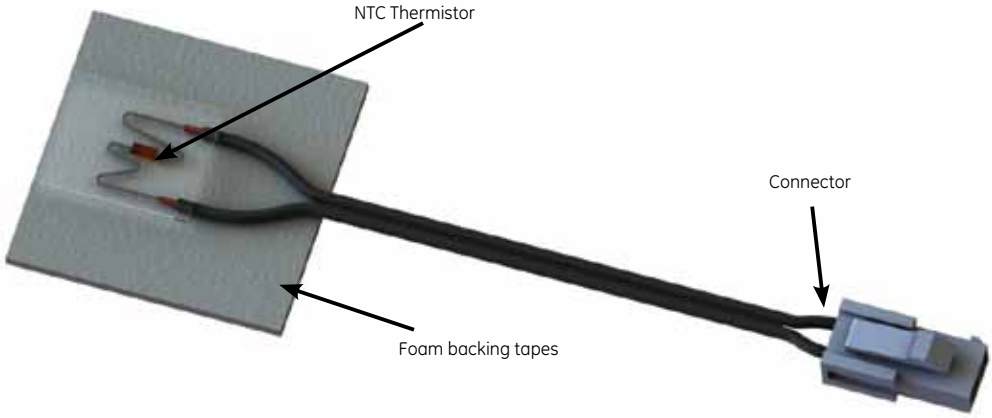


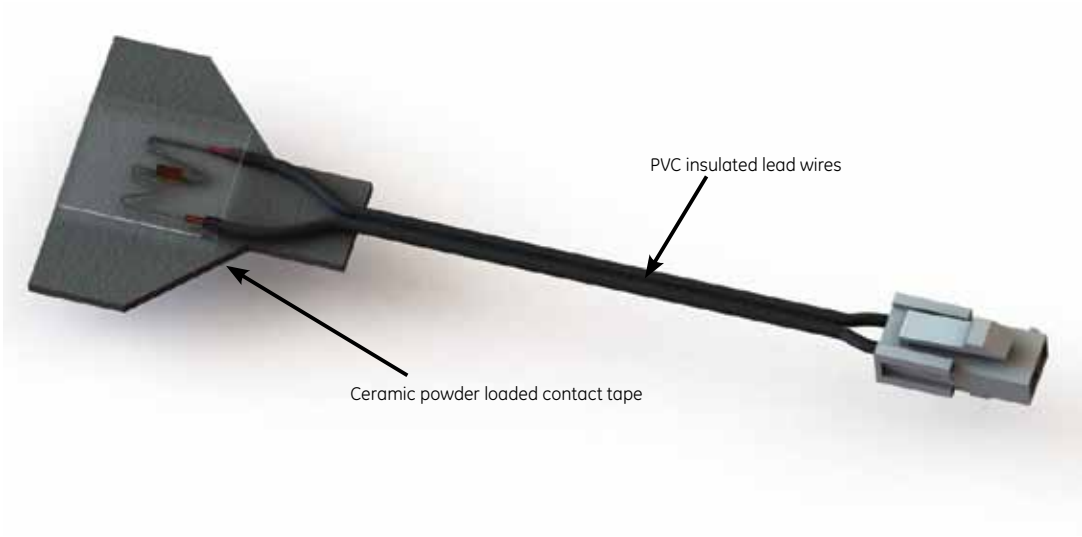
Placement on Water Heater Tank

The sensors are designed to work in predominantly dry environments and are particularly suited for domestic applications where they can be positioned between the water tank and an insulating jacket as shown. The sensors should NOT be used externally where they can be subjected to wind, rain and direct sun.

Residual oil on the surface of a metallic tank, resulting from a drawing process, can cause a loss of adhesion. Oil residuals should be cleaned away before the application of the sensor.

Product Design





Specifications

Part number	Foam backing size / mm	Full length / mm	Connector type
JS4298	45x45, square	700	Molex 5559
JS5698	45x45, square	750	Molex 5559
JS6670	45x45, square	280	Molex 5559
JS6862	45x45, square	650	Molex 5559
JS6744	45x45, square	320	Molex 5559
JS6812	45x45, square	420	Molex 5559
JS5539	30 wide x 70 long, rectangular	125	Molex 5559
JS7289	45 wide x15 long & 15 wide x 15 long, tapered	320	Molex 5559
JS7290	45 wide x15 long & 15 wide x 15 long, tapered	420	Molex 5559
JS7352	45 wide x15 long & 15 wide x 15 long, tapered	160	Molex 5559

Thermal Equilibrium Resistance vs. Temperature Table

Temp	R nom	R min	R max	R Tol	R Tol	T Tol	T Tol
°C	/Ω	/Ω	/Ω	- %	+ %	+ °C	- °C
-30	173790	161580	186760	-7.03	7.46	1.14	-1.21
-25	128270	119620	137420	-6.75	7.14	1.13	-1.19
-20	95627	89439	102150	-6.47	6.82	1.12	-1.18
-15	71980	67513	76673	-6.21	6.52	1.11	-1.17
-10	54678	51427	58083	-5.95	6.23	1.10	-1.15
-5	41900	39513	44391	-5.70	5.94	1.09	-1.13
0	32377	30611	34213	-5.45	5.67	1.07	-1.12
5	25218	23902	26582	-5.22	5.41	1.06	-1.10
10	19792	18805	20812	-4.99	5.15	1.04	-1.08
15	15647	14902	16415	-4.76	4.91	1.03	-1.06
20	12457	11890	13038	-4.55	4.67	1.01	-1.04
25	9983.1	9550.5	10426	-4.33	4.44	0.99	-1.02
30	8052.1	7719.7	8391.2	-4.13	4.21	0.97	-0.99
35	6534.4	6277.7	6795.4	-3.93	3.99	0.95	-0.97
40	5334.0	5134.9	5535.8	-3.73	3.78	0.93	-0.95
45	4378.7	4223.6	4535.4	-3.54	3.58	0.91	-0.92
50	3614.0	3492.7	3736.1	-3.36	3.38	0.89	-0.89
55	2998.3	2903.1	3093.9	-3.18	3.19	0.86	-0.87
60	2500.0	2425.0	2575.0	-3.00	3.00	0.84	-0.84
65	2094.5	2028.1	2161.2	-3.17	3.18	0.91	-0.91
70	1762.9	1704.0	1822.1	-3.34	3.36	0.98	-0.99

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