

IMMERSION SAFE

Immersion temperature sensor in
NEMA 4X / IP65 plastic enclosure



FEATURES

- Durable injection-molded NEMA 4X/IP65 watertight enclosure
- Internally hinged, removable, locking cover
- Available in standard 2" / 4" / 6" lengths
- Complete with compression fit 1/2" NPT brass or stainless steel immersion well
- Option for brass compression adapter (1/2" or 1/4" NPT)
- Includes conveniently packaged syringe of thermal paste
- Built in 1/2" NPT conduit connection optional with additional side knock-outs
- Quick Connect wire terminals
- AISI 316 stainless steel temperature probe
- NTC thermistors or RTD elements available
- CE & RoHS compliant
- 5 Year Limited Warranty
- Made in the USA

GENERAL INFORMATION

The Tasseron Safe Immersion Temperature Sensor provides a high quality solution for both commercial and industrial applications. The Safe housing offers weatherproof NEMA 4X / IP65 ratings and is produced with injection-molded polycarbonate material and stainless steel AISI 316 probe.

The available measuring elements interface with most major control manufacturers. Accurate thermistors and RTDs ensure low drift and are double encapsulated to guarantee the highest reliability in the field. The internally hinged locking cover and Quick Connect wire terminals make installation easy and reduces installation costs.

The sensor comes with a compression-fit 1/2" NPT Brass (machined) or Stainless Steel (fabricated) immersion well and a syringe of thermal paste for improved conductivity and fast application. For existing or 3rd party thermowells, the immersion series can be equipped with 1/2" NPT or 1/4" NPT brass compression adapters.

SPECIFICATIONS

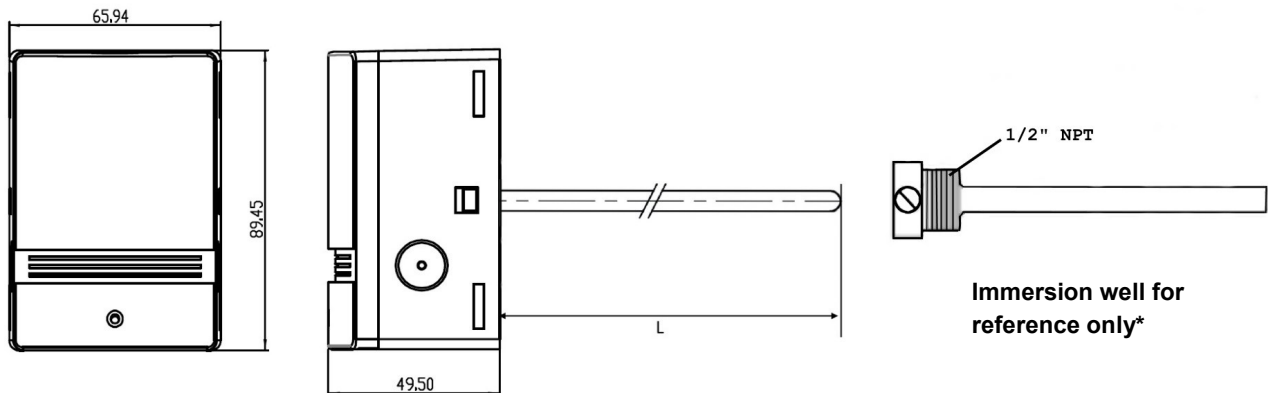
Enclosure: Weatherproof NEMA 4X/IP65, injection-molded polycarbonate UL 94 V-2
Cover: Quick snap with internal hinges and screw locking ability

Mounting Options: 1/2" NPT compression Brass C36000 (machined) thermowell
1/2" NPT compression Stainless Steel AISI 316 (fabricated) thermowell
1/2" NPT or 1/4" NPT compression brass adapter
**Machined high pressure available wells on request*
**Other threading options available on request*

SPECIFICATIONS CONT.

Probe Length:	2" / 4" / 6" standard <i>*other lengths on request</i>
Probe Material:	6mm ($\pm 1/4$ ") AISI 316 stainless steel
Connection:	2 pole AWG 22-16 / 0.35—1.5mm ² spring-loaded, Quick Connect wire terminals
Sensor Element:	Interchangeable NTC thermistor, 2-wire RTD Pt100, Pt1000, 2-wire RTD Ni1000-891, Ni1000-TC5, 2 wire
Sensor Value:	NTC 10K Ohm type 2 @ 25°C / 77°F NTC 10K Ohm type 3 @ 25°C / 77°F NTC 20K Ohm @ 25°C / 77°F NTC 3K Ohm @ 25°C / 77°F NTC 10K Ohm type 4 @ 25°C / 77°F RTD Pt1000 1000 Ohm @ 0°C / 32°F RTD Pt100 100 Ohm @ 0°C / 32°F RTD Ni1000-891 891 Ohm @ 0°C / 32°F RTD Ni1000-TC5 1000 Ohm @ 0°C / 32°F (Other elements on request)
Accuracy:	NTC thermistor 0...70°C ± 0.2 °C / 32...158°F ± 0.36 °F Pt100 / Pt1000 Class B IEC751, ± 0.3 °C / ± 0.5 °F @ 0°C / 32°F Ni1000 DIN 43760, ± 0.5 °C / ± 0.9 °F @ 0°C / 32°F
Range:	-40...105°C / -40...221°F
Approval:	CE & RoHS compliant
Warranty:	5 year limited warranty
Accessories:	Machined stainless steel immersion wells 1/2" NPT plastic compression adapter

DIMENSIONS (in mm)



ORDERING INFORMATION

HOW TO BUILD A TASSERON IMMERSION SAFE PART NUMBER

Sample Part Number (THTISA4B) —Immersion Safe sensor with 10k-2 element, 4" probe with brass/copper well. Also comes with a syringe of thermal paste.

T	H	T	I	S	A	4B
Tasseron	HVAC	Temp	Immersion	Safe Box	Element	Details
					A—10K -2	2A—2" probe, 1/2" NPT adapter
					B—10K -3	
					C—20K	
					D—3K	2Q—2" probe, 1/4" NPT adapter
					E—Pt1000	
					F—Ni1000-891	
					G—10K-4	2B—2" probe, brass thermowell
				*Other elements available on request	H— Pt100	
					I—4.7K	
					J—10K-3 (11K)	2S—2" probe, SS thermowell
					K— Ni1000-TC5	
						4A—4" probe, 1/2" NPT adapter
						4Q—4" probe, 1/4" NPT adapter
						4B—4" probe, brass thermowell
						4S—4" probe, SS thermowell
						6A—6" probe, 1/2" NPT adapter
						6Q—6" probe, 1/4" NPT adapter
						6B—6" probe, brass thermowell
						6S—6" probe, SS thermowell

NOTE:

Immersion sensors with lengths other than 2", 4", 6" are available with third party provided well.

Additional immersion sensors with a 1/2" or 1/4" NPT compression adapter are available in 6", 8" or 12" lengths.

Other threading options available on request.

HVAC temperature measuring elements

R/T TABLES

Temp		NTC thermistors					RTD elements			
		curve A	curve B	curve G	curve C	curve D	curve E	curve F	curve H	curve K
		NTC 10K type 2	NTC 10K type 3	NTC 10K type 4	NTC 20KOhm	NTC 3KOhm	Pt1000/B	Ni1000-891	Pt100/B	Ni1000-TC5
°C	°F	R (kOhm)	R (kOhm)	R (kOhm)	R (kOhm)	R (kOhm)	R (Ohm)	R (Ohm)	R (Ohm)	R (Ohm)
-40	-40	341.4	242.1	191.9	784.6	97.40	843	697	84.3	831
-35	-31	246.2	181.0	146.6	558.8	71.53	862	719	86.2	851
-30	-22	179.5	136.6	112.9	402.7	52.80	882	743	88.2	872
-25	-13	132.2	103.9	87.59	293.6	39.16	902	766	90.2	893
-20	-4	98.34	79.64	68.47	216.3	29.24	922	790	92.2	914
-15	5	73.73	61.54	53.91	160.7	22.04	941	815	94.1	935
-10	14	55.78	47.91	42.74	120.5	16.74	961	839	96.1	956
-5	23	42.59	37.57	34.11	91.07	12.79	980	864	98.0	978
0	32	32.82	29.66	27.40	69.40	9.856	1000	891	100.0	1000
5	41	25.52	23.57	22.14	53.33	7.663	1020	916	102.0	1022
10	50	19.97	18.85	17.99	41.28	5.999	1039	942	103.9	1045
15	59	15.75	15.17	14.72	32.18	4.729	1058	968	105.8	1068
20	68	12.51	12.28	12.09	25.28	3.754	1078	994	107.8	1091
25	77	10.00	10.00	10.00	20.00	3.000	1097	1021	109.7	1114
30	86	8.048	8.184	8.308	15.92	2.416	1117	1048	111.7	1138
35	95	6.516	6.735	6.936	12.75	1.957	1136	1075	113.6	1162
40	104	5.306	5.577	5.819	10.27	1.595	1155	1102	115.5	1186
45	113	4.345	4.641	4.904	8.320	1.307	1175	1130	117.5	1210
50	122	3.578	3.877	4.151	6.779	1.076	1194	1158	119.4	1235
55	131	2.962	3.261	3.529	5.556	0.888	1213	1187	121.3	1260
60	140	2.464	2.756	3.012	4.577	0.737	1232	1216	123.2	1285
65	149	2.060	2.340	2.582	3.788	0.616	1252	1245	125.2	1311
70	158	1.730	1.996	2.221	3.150	0.518	1271	1274	127.1	1337
75	167	1.460	1.707	1.918	2.630	0.441	1290	1304	129.0	1364
80	176	1.236	1.466	1.663	2.206	0.377	1309	1334	130.9	1390
85	185	1.051	1.264	1.446	1.857	0.324	1328	1365	132.8	1417
90	194	0.896	1.095	1.262	1.570	0.278	1347	1396	134.7	1444
95	203	0.767	0.952	1.105	1.333	0.239	1366	1427	136.6	1472
100	212	0.659	0.831	0.970	1.136	0.206	1385	1459	138.5	1500
105	221	0.569	0.728	0.855	0.972	0.179	1404	1491	140.4	1528
110	230	0.493	0.640	0.755	0.834	0.156	1423	1524	142.3	1557
115	239	0.428	0.564	0.669	0.719	0.136	1442	1556	144.2	1586
120	248	0.374	0.499	0.594	0.621	0.119	1461	1590	146.1	1615
125	257	0.327	0.443	0.529	0.539	0.105	1479	1623	147.9	1645

* Other elements on request

Tasseron Sensors Inc.

140 Choate Circle

Montoursville, PA 17754

Tel: +1 (570) 601-1971

Fax: +1 (570) 601-1972

Email: sales@tasseronusa.com