

BUTTON CO2

Low visibility wall or ceiling mount sensor for carbon dioxide (CO2) & temperature (T)



FEATURES

- CO2 or CO2/Temp options
- Very low-profile enclosure with high airflow
- Highly accurate photoacoustic CO2 sensing technology
- CO2 analog output in 0-10V over 0-2000ppm
- AC or DC power supply accepted
- NTC thermistors and RTD passive temperature elements available
- Easy and secure installation in wall board 3/8" to 3/4"
- Compatible with most control systems
- Paintable cover and available in white or black plastic
- 5 year limited warranty
- Made in the USA

GENERAL INFORMATION

High quality wall or ceiling mount CO2 and optional temperature sensor in the very low-profile button enclosure. The easy-to-install units are ideal for office environments, as well as museums, galleries, or any other open indoor setting where concealability is important.

The Tasseron Button Series is available as a CO2 only or as a combination sensor with available NTC or RTD passive temperature elements. Other models offer relative humidity and/or temperature only options.

The 1-3/4 inch diameter face protrudes just slightly over 1/4 inch from the wall surface, and is easily painted or wallpapered to blend into the environment. The product is available in white or black plastic as standard options.

SPECIFICATIONS

General:

Supply Voltage: 24V DC +/-20%; 24V AC +/-20%
Power Consumption: 3VA for 24VAC, 3W for 24VDC (peak);
Output Signal: Analog: 0-10V

Mounting: 1-1/2 inch hole wall or ceiling 3/8—3/4 inch thickness
Connection: AWG 22-16 / 0.35—1.5mm² screw-terminals
Enclosure: Injection-molded PC/ABS, UL94 V-0 flame rating
Cover: Snap in, injection-molded PC/ABS

SPECIFICATIONS CONT.

CO2 Sensor:

Sensing Technology: Photoacoustic sensor technology
Measurement Range: 0...2000 ppm
Accuracy: ± 40 ppm $\pm 5\%$ m.v.
Repeatability: 10 ppm
Long Term Stability: ± 5 ppm per year
Temperature Operating Range: 0 to 50°C / 32 to 122°F
Response Time: 100 sec.
Warm Up Time: < 1 minute (@ full specs < 15 minutes)

Temperature Sensor:

Temperature Element: Interchangeable NTC thermistor or RTD, 2-wire

Sensor Value:

RTD Pt1000, 2-wire
RTD Ni1000-891, 2-wire
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
RTD Pt100 100 Ohm @ 0°C / 32°F
RTD Pt1000 1000 Ohm @ 0°C / 32°F
RTD Ni1000-891 891 Ohm @ 0°C / 77°F

Accuracy:

NTC thermistor 0...70° $\pm 0.2^\circ\text{C}$ / 32...158°F $\pm 0.36^\circ\text{F}$
Pt1000 Class B IEC751, $\pm 0.3^\circ\text{C}$ / $\pm 0.5^\circ\text{F}$ @ 0°C / 32°F
Ni1000 DIN 43760, $\pm 0.5^\circ\text{C}$ / $\pm 0.9^\circ\text{F}$ @ 0°C / 32°F

Approval:

CE & RoHS compliant

Warranty:

5 year limited warranty

Accessories:

Optional customer logo printed on cover

Tasseron Sensors Inc.

140 Choate Circle

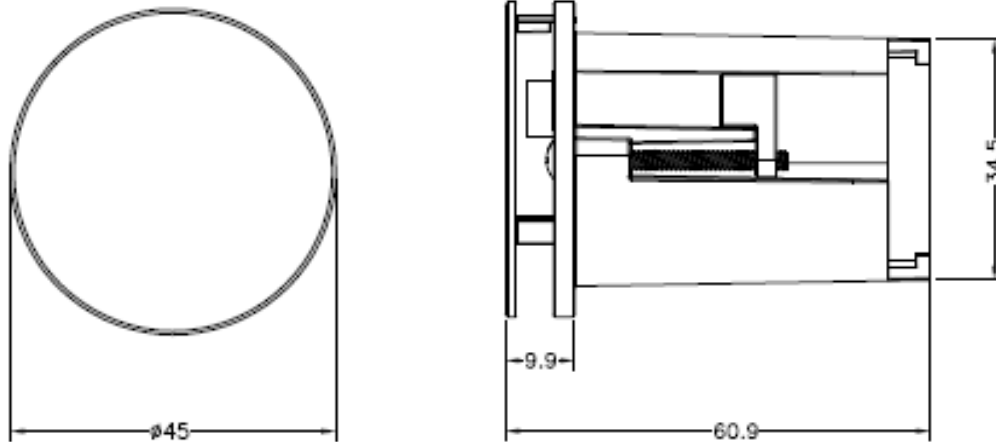
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DIMENSIONS (in mm)



HOW TO BUILD A TASSERON BUTTON CO₂/TEMP PART NUMBER

Sample Part number (THCBWAZC) — Button CO₂ sensor with 0-2000ppm measurement range, 10K-2 passive temperature, and 0-10V output for CO₂.

T H C B W A Z C

TASSERON	HVAC	SENSOR TYPE	BUTTON	COLOR	TEMP	RH ACCURACY	OUTPUT
		C- Carbon Dioxide		B—Black	A—10K -2	2—2%*	C—0-10V
		H- Humidity		W—White	B—10K -3	3—3%*	
		T- Temperature			C—20K	5—5%*	
					D—3K	Z- NO HUMIDITY	
					E—Pt1000	*not available in	
					F—Ni1000-891	CO ₂ version	
					G—10K-4		
					H— Pt100		
					I—4.7K		
					J—10K-3 (11K)		
					K— Ni1000-TC5		
					Y—DIGITAL		
					Z—NO TEMP		

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

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