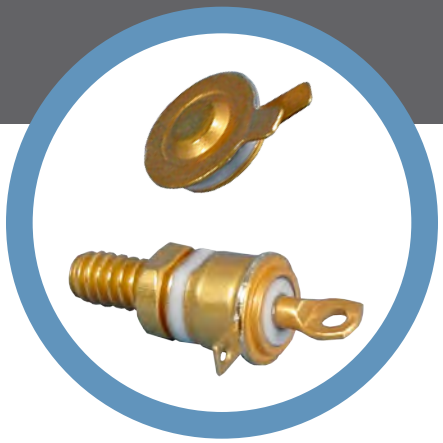


KLIXON® | 3BT / 4BT Series

Tiny Stat™ Hermetic Thermostats, -18°C to 177°C, SPST

FEATURES

- Smallest snap-acting thermal switches on the market today
- Single Pole / Single Throw (SPST)
- Preset temperature set points, non-adjustable calibration
- Hermetically sealed and back-filled with nitrogen
- Various mounting configurations available
- Qualified to MIL-PRF-24236/13 (4BT) and MIL-PRF-24236/19 (3BT)

INTRODUCTION

The Klixon® Tiny Stat™ 3BT and 4BT series combine an impressive list of superlatives in a reliable, hermetically sealed, snap–acting design. The 3BT and 4BT series are the smallest envelope size ever developed, ideal for remote sensing applications in locations with severe space limitations. The 3BT and 4BT are the lightest construction available on the market today, and are perfect for applications where weight is an important consideration. All Klixon Tiny Stats have an extremely fast response in order to permit early warning of overheat conditions. Their low mass internal components allow Tiny Stat precision thermostats to meet the most demanding shock and vibration standards of MIL-PRF-24236. Gold plated contacts can be furnished when low wattage conditions exist that requires reliable circuit switching.

Applications include electronics overheat protection, transformer windings and medical equipment.

SPECIFICATIONS

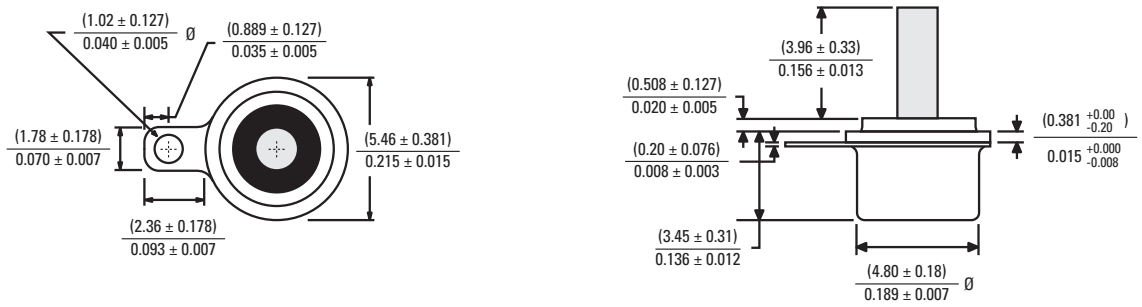
Contact Ratings	*Cycles* / *Voltage* / *Amps (resistive)* 10,000 / 115VAC / 30 VDC / 1.00 (silver contacts) 10,000 / 30 VAC / VDC / 0.10 (silver contacts) 10,000 / 30VAC / VDC / 500 mA and below (gold contacts) 10,000 / 115VAC / 200 mA and below (gold contacts)
Contact Operations	Either close on rise or open on rise , SPST (Single Pole, Single Throw)
Operating Temperature	-18°C to 177°C (+0°F to 350°F)
Dielectric Strength	500 VAC, rms, 60 cycles for 1 minute, across open contacts, per MIL-STD-202, Method 301
Contact Resistance	0.050 ohms maximum (0.100 ohms maximum for close on rise devices with set points greater than 175°F), per MIL-STD-202, Method 307
Vibration	5–2000 Hz, 30 G, per MIL-STD-202, Method 204 *Devices which open on rise should not be subjected to vibration while at temperature of 75°F or more below the opening temperature. Devices that close on rise should not be subjected to vibration while at temperatures of 75°F or more above the closing temperature.*
Shock	100 G, 6 milliseconds, per MIL-STD-202, Method 213
Hermeticity	1 x 10^{-8} atm cc/sec. maximum, per MIL-STD-202, Method 112, Condition C
Salt Spray	Per MIL-STD-202, Method 101, Condition B, 5% solution
Weight	Basic Unit: 0.2 to 0.9 grams
Ambient Temperature Range	-62°C to 177°C (-80°F to 350°F)

STANDARD TEMPERATURE SETTINGS – STD. TOLERANCE OF ± 4.4°C (8°F)

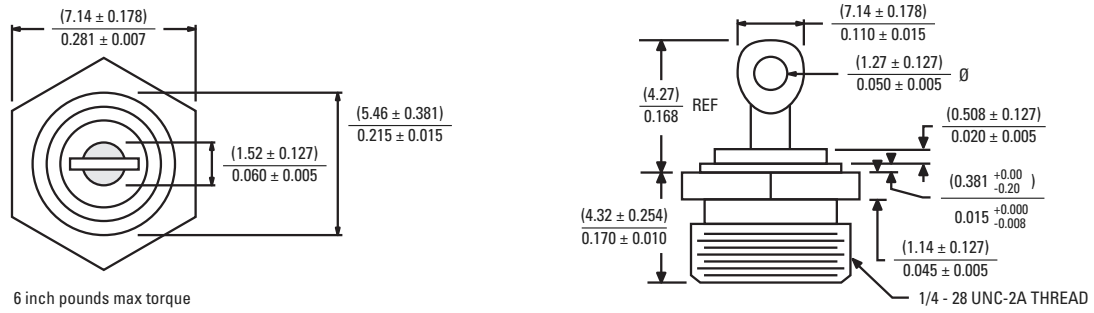
CODE	OPERATING TEMPERATURE		DIFFERENTIAL		CODE	OPERATING TEMPERATURE		DIFFERENTIAL		CODE	OPERATING TEMPERATURE		DIFFERENTIAL	
	°C	°F	°C	°F		°C	°F	°C	°F		°C	°F	°C	°F
1	-18	0	17	30	**25**	49	120	17	30	**49**	116	240	17	30
2	-15	5	17	30	**26**	52	125	17	30	**50**	118	245	17	30
3	-12	10	17	30	**27**	54	130	17	30	**51**	121	250	17	30
4	-9	15	17	30	**28**	57	135	17	30	**52**	124	255	17	30
5	-7	20	17	30	**29**	60	140	17	30	**53**	127	260	17	30
6	-4	25	17	30	**30**	63	145	17	30	**54**	129	265	17	30
7	-1	30	17	30	**31**	66	150	17	30	**55**	132	270	17	30
8	2	35	17	30	**32**	68	155	17	30	**56**	135	275	17	30
9	4	40	17	30	**33**	71	160	17	30	**57**	138	280	17	30
10	7	45	17	30	**34**	74	165	17	30	**58**	141	285	17	30
11	10	50	17	30	**35**	77	170	17	30	**59**	143	290	17	30
12	13	55	17	30	**36**	79	175	17	30	**60**	146	295	17	30
13	16	60	17	30	**37**	82	180	17	30	**61**	149	300	17	30
14	18	65	17	30	**38**	85	185	17	30	**62**	152	305	17	30
15	21	70	17	30	**39**	88	190	17	30	**63**	154	310	17	30
16	24	75	17	30	**40**	91	195	17	30	**64**	157	315	17	30
17	27	80	17	30	**41**	93	200	17	30	**65**	160	320	17	30
18	29	85	17	30	**42**	96	205	17	30	**66**	163	325	17	30
19	32	90	17	30	**43**	99	210	17	30	**67**	166	330	17	30
20	35	95	17	30	**44**	102	215	17	30	**68**	168	335	17	30
21	38	100	17	30	**45**	104	220	17	30	**69**	171	340	17	30
22	41	105	17	30	**46**	107	225	17	30	**70**	174	345	17	30
23	43	110	17	30	**47**	110	230	17	30	**71**	177	350	17	30
24	46	115	17	30	**48**	113	235	17	30	*Consult factory for additional temperatures*				

STANDARD CONFIGURATIONS

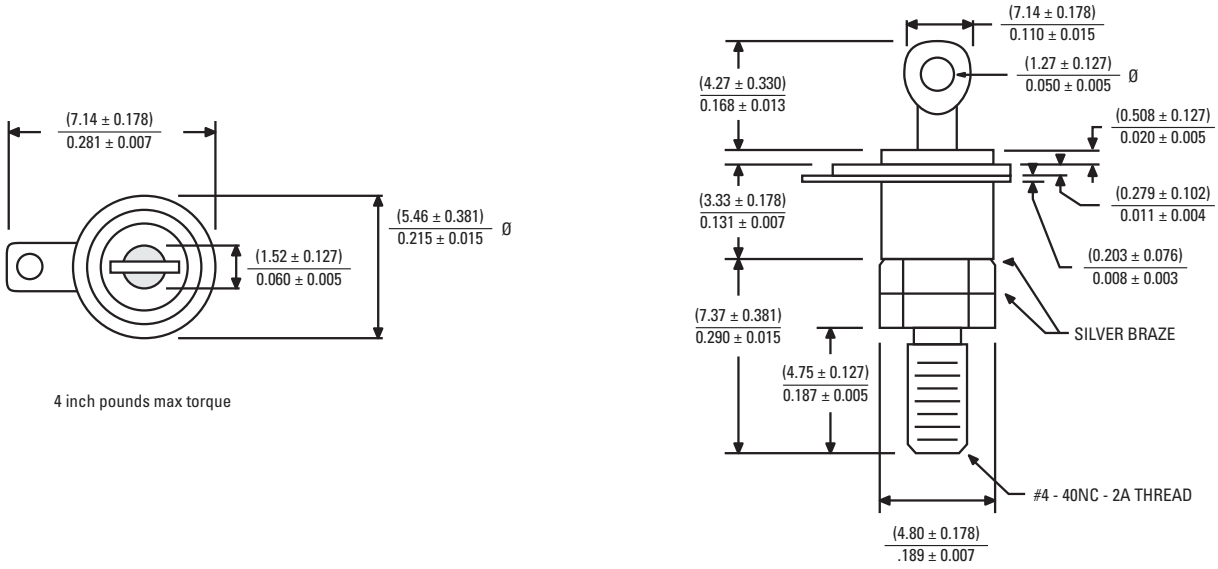
3BT-2 Grounded Case Construction | Approx. wt. 0.4 grams | Conforms to MIL-PRF-24236/19 | Config 1



3BT-3 Grounded Case Construction | Approx. wt. 0.9 grams | Conforms to MIL-PRF-24236/19 | Config 3

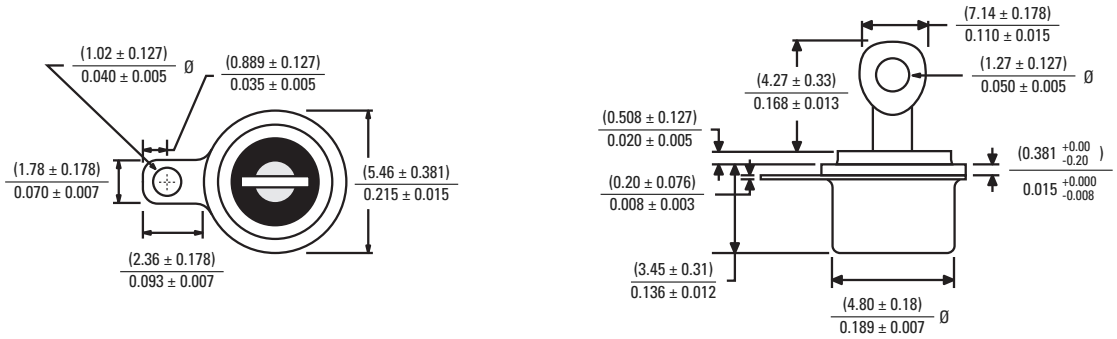


3BT-6 Insulated Case Construction | Approx. wt. 0.9 grams | Conforms to MIL-PRF-24236/19 | Config 3

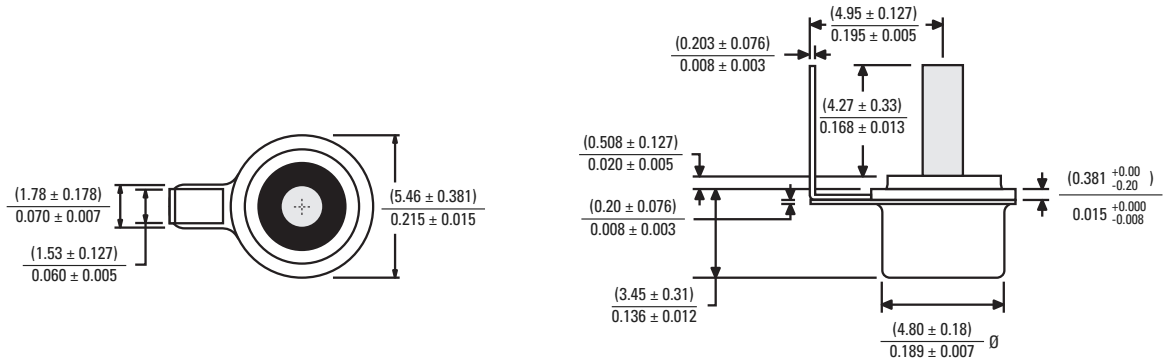


STANDARD CONFIGURATIONS

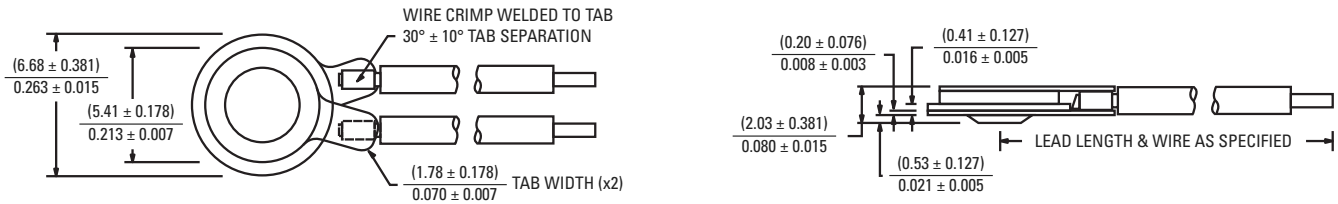
3BT-8 Grounded Case Construction | Approx. wt. 0.4 grams | Conforms to MIL-PRF-24236/19 | Config 4



3BT-15 PC Board Mount | Approx. wt. 0.4 grams | Conforms to MIL-PRF-24236/19 | Config 5



4BT-2 Grounded Case Construction | Approx. wt. 0.9 grams | Conforms to MIL-PRF-24236/19 | Config 1



Additional configurations available, contact Sensata Technologies for more information. All dimensions are nominal, (millimeters) / inches.

STANDARD 3BT PART NUMBER BUILDER

3BT D 6 – 37

1. Product Series
   3BT

2. Contact Operation
   L = Open on rise, silver contacts
   R = Open on rise, gold contacts
   F = Close on rise, silver contacts
   D = Close on rise, gold contacts

3. Configuration

4. Operation Temperature (Code **1** to **71**)

The example to the left is a 3BT-6 configuration, close on rise, gold contacts, close on rise at 82°C ± 4.4°C, open at 65°C ± 4.4°C.

STANDARD 4BT PART NUMBER BUILDER

4BT L 2 – 22 – 98

1. Product Series
   4BT

2. Contact Operation
   L = Open on rise, silver contacts
   R = Open on rise, gold contacts
   F = Close on rise, silver contacts
   D = Close on rise, gold contacts

3. Configuration

4. Operation Temperature (Code **1** to **71**)

5. Optional Lead Wire (4BT only, Code **98**)
   12" stranded 22 gauge white Teflon insulated
   (Leave blank if leads are not required)

The example to the left is a 4BT-2 configuration, open on rise, silver contacts, open on rise at 41°C ± 4.4°C, close at 24°C ± 4.4°C with 12" wire leads