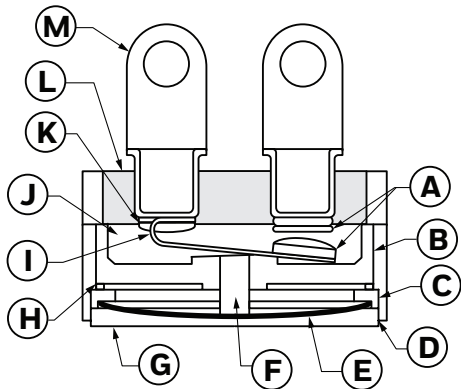


PRECISION AND HIGH RELIABILITY THERMOSTATS



- A** Contacts
- B** Ceramic insulator
- C** Disc retainer
- D** Laser weld
- E** Bimetal disc
- F** Ceramic transfer pin
- G** Cap
- H** Capping washer
- I** Contact arm
- J** Backfill dry gas
- K** Weld cap
- L** Glass header
- M** Terminals

POTENTIAL APPLICATIONS

- Military aircraft
- Commercial aircraft
- Military vehicles

3500 SERIES MILITARY THERMOSTATS

The 3500 Series is a single-pole, single-throw switch activated by a snap-action bimetal disc. It meets or exceeds the requirements of MIL-PRF-24236 and is designed for potential military and commercial aircraft applications. It is not QPL listed (see the 3MS1 QPL Series). The case is laser welded to form a hermetically sealed steel housing, with a glass-to-metal seal at the terminal junction. Temperature calibrations are pre-set at the factory, and each unit is thermally and mechanically inspected. It is available to open or close on temperature rise.

TABLE 30. 3500 SERIES STANDARD OPERATING TEMPERATURE CHARACTERISTICS

Operating Temperature Range	Tolerance		Nominal Differential °C [°F]	Max. Differential °C [°F]
	Open °C [°F]	Close °C [°F]		
-45.6°C to 17.8°C [-50°F to 0°F]	±8,3 [±15]	±8,3 [±15]	16,7 to 33,3 [30 to 60]	–
	±5,6 [±10]	±5,6 [±10]	16,7 to 33,3 [30 to 60]	–
	±4,4 [±8]	±4,4 [±8]	11,1 to 27,8 [20 to 50]	–
-17.2°C to 93.3°C [1°F to 200°F]	±8,3 [±15]	±8,3 [±15]	16,7 to 33,3 [30 to 60]	–
	±5,6 [±10]	±5,6 [±10]	16,7 to 33,3 [30 to 60]	–
	±4,4 [±8]	±4,4 [±8]	11,1 to 27,8 [20 to 50]	–
	±2,8 [±5]	±2,8 [±5]	5,6 to 22,2 [10 to 40]	–
	±2,2 [±4]	–	–	4,4 [8]
93.9°C to 148.9°C [201°F to 300°F]	–	±2,2 [±4]	–	4,4 [8]
	±8,3 [±15]	±8,3 [±15]	16,7 to 33,3 [30 to 60]	–
	±5,6 [±10]	±5,6 [±10]	16,7 to 33,3 [30 to 60]	–
	±4,4 [±8]	±4,4 [±8]	11,1 to 27,8 [20 to 50]	–
	±2,8 [±5]	±2,8 [±5]	5,6 to 22,2 [10 to 40]	–
149.4°C to 176.6°C [301°F to 350°F]	±2,2 [±4]	–	–	4,4 [8]
	–	±2,2 [±4]	–	4,4 [8]
	±8,3 [±15]	±8,3 [±15]	16,7 to 33,3 [30 to 60]	–
	±5,6 [±10]	±5,6 [±10]	16,7 to 33,3 [30 to 60]	–
	±4,4 [±8]	±4,4 [±8]	11,1 to 27,8 [20 to 50]	–
177.2°C to 204.4°C [351°F to 400°F]	±2,8 [±5]	–	–	5,5 [10]
	–	2,8 [±5]	–	5,5 [10]
	±8,3 [±15]	±8,3 [±15]	16,7 to 44,4 [30 to 80]	–
177.2°C to 204.4°C [351°F to 400°F]	±5,6 [±10]	±5,6 [±10]	16,7 to 33,3 [30 to 60]	–
	±4,4 [±8]	±4,4 [±8]	8,3 to 10,6 [15 to 19]	–
	±3,3 [±6]	–	–	8,3 [15]
	–	±4,4 [±8]	–	8,3 [15]

PRECISION AND HIGH RELIABILITY THERMOSTATS

TABLE 31. 3500 SERIES SPECIFICATIONS

Characteristic	Parameter
Switch type	SPST
Reset type	automatic
Amperage	5 A resistive (see Table 32)
Voltage	28 Vdc (see Table 32)
Operating temperature range	-51°C to 204°C [-60°F to 400°F]
Environmental exposure range	-65°C to 260°C [-85°F to 500°F]
Dielectric strength	MIL-STD-202, Method 301, 1250 Vac
Insulation resistance	MIL-STD-202, Method 302, 500 MOhm
Contact resistance	MIL-STD-202, Method 307, 50 mOhm max.
Hermetic seal	MIL-STD-202, Method 112, Cond. C
Moisture resistance	MIL-STD-202, Method 106
Shock	MIL-STD-202, Method 213, 400 G
Vibration	MIL-STD-202, Method 204, 20 G
Acceleration	MIL-STD-202, Method 212, 20 G
Thermal shock	MIL-STD-202, Method 107, Cond. B
Salt spray*	MIL-STD-202, Method 101, Cond. B
Housing material	cold rolled plated steel
Marking	MIL-STD-1285
Weight	7,5 g [0.26 oz] (brackets and lead wire not included)

*Not applicable to thermostats with brackets or those operating at temperatures above 162.8°C [325°F].

TABLE 32. 3500 CONTACT RATINGS

Load Type	Life Cycles	28 Vac/dc	115 Vac
Resistive	100,000	5 A	2 A
Inductive	100,000	2.5 A	1 A
Lamp	100,000	1 A	0.5 A