



5TC Series

Single Phase, Ambient Compensated

Features

- Trip free
- Current ratings (20 - 50amps)
- Coordinated ratings
- High vibration resistance
- High interrupting capacity



Overview

Klixon® single-phase TC devices represent “state-of-the-art” protection for today’s aerospace power systems.

The Klixon trademark has set the standard for aerospace circuit breakers. The TC series offers the endurance and reliability required by exacting military specifications and is available in standard current ratings from 20 – 50 amperes.

Coordination

The single phase 5TC rating is coordinated so it will trip before another circuit breaker, twice its rating, in the event of a fault of

up to 600 amps let through current. This results in improved overall equipment performance, since only the smallest faulted circuit is interrupted, while larger circuits remain operational.

Ambient Temperature Compensation

The 5TC serves as an ambient compensated circuit breaker. It permits system designers to specify smaller gauge wire where the circuit breaker and wiring are exposed to different ambient temperatures. They are especially suited for application where ambient temperature exceeds the 160°F (71°C) maximum of non-

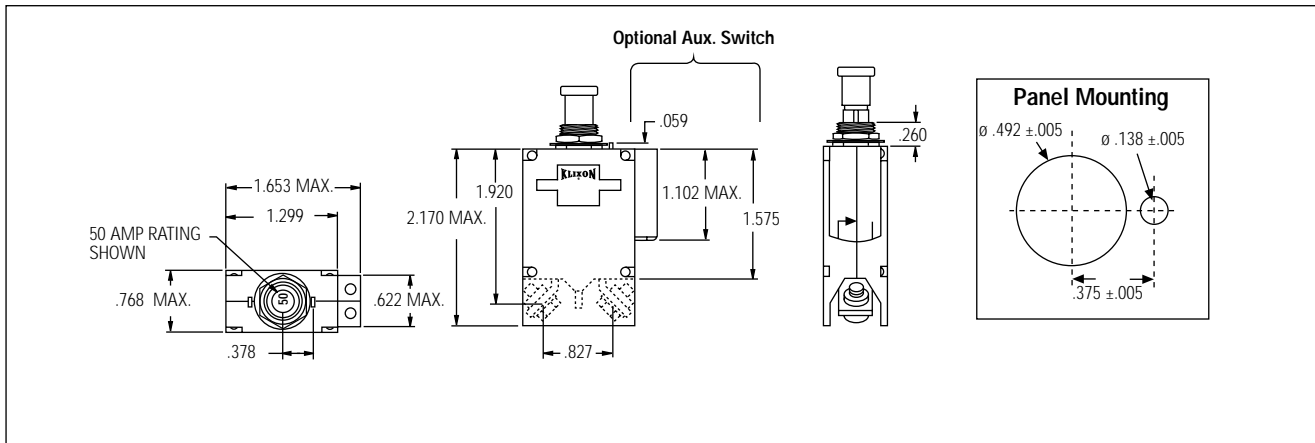
ambient compensated thermal circuit breakers. The 5TC series may be applied where operating temperatures are as high as 250°F (121°C), with no derating of the circuit breaker. This eliminates the need for cooling air and allows substantial weight, space and cost savings.

Options

- Longer pushbuttons
- Standard or auxiliary switch configuration
- Terminal barriers

Qualifications

ASNE0732-005	5TC65
NSA931321	5TC50



Calibration: 20-50 Amps

Temp °C	Min. ULT. Trip	Max. ULT. Trip	Trip Time - Seconds		
			200%	500%	1000%
+23	110%	145%	2-18	.15 - 2.5	.045 - .6
-54	110%	165%	70 sec. max.	.15 - 2.5	.045 - .6
+70	105%	145%	1.5 sec. min.	.15 - 2.5	.045 - .6
+125	90%	145%	1.5 sec. min.	.15 - 2.5	.045 - .6

The above calibration chart is representative of a standard commercial device. TI offers specific variants with similar performance dependant on military or customer specifications. Temperatures are $\pm 5^{\circ}\text{C}$.

Performance

Vibration	10 G's minimum, 80-500 Hz
Mechanical Shock	50 G's
Acceleration	10 G's
Weight	
Standard Device	53 grams (w/o hw), 58 grams (w/hw)
Auxiliary Device	55 grams (w/o hw), 59 grams (w/hw)

Interrupting Capacity

20-50 amps.....4000 amps at 28 VDC
 20-50 amps..... 2000 amps at 115 VAC,400 Hz

Endurance

2500 cycles.....115 VAC, 400 Hz,Inductive
 2500 cycles.....28 VDC, Inductive
 2500 cycles.....28 VDC, Resistive
 5000 cycles.....Mechanical, no load

Basic Type – Amps (20 – 50)

5TC50-XX: Std. Version

5TC65-XX: Auxiliary

XX – denotes Amp rating

Amp Rating	Voltage Drop (max)*
20	0.150
25	0.150
35	0.150
50	0.120

* Max. voltage drop at nominal rated current

Approximate Time-Current Curves - 5TC Circuit Breakers

