

Klixon® 2TC series

1–25 amp, single–phase, miniature ambient compensated

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Features and Overview

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- Miniature size
- Light weight
- Trip–free design
- Current ratings (1 to 25 amps)
- High vibration resistance
- High interrupting capacity
- Coordinated ratings
- AS58091 qualified
(Also: [Military Approvals](#), [FAA PMA](#))
- Typical end use: Aircraft power distribution systems

Klixon single–phase TC devices are the smallest, lightest high performance aircraft circuit breakers available today. They represent the state-of-the-art protection of today's aerospace power systems. Their light weight and small size make them especially well suited for aircraft, avionics and electronic systems. The Klixon trademark has set the standard for aerospace circuit breakers and the TC series offers the endurance and reliability required by exacting military specifications.

Coordination

The 2TC series breaker ratings are coordinated so any rating will trip before another rating twice its capacity in the event of a fault. of up to 6,000 amps let–thru current. This results in improved overall equipment performance since only the smallest faulted circuit is interrupted, while larger circuits remain operational.

Ambient Temperature Compensation

Ambient compensated circuit breakers let designers 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 TC 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.

Trip–Free

The complete line of TC series circuit breakers is trip–free. The circuit breaker cannot be maintained closed during an overload even with the actuator button held closed.

High Short Circuit Capacity

For its miniature size, the 2TC series offers unusually high current interrupting capacity. Overloads can be safely interrupted without affecting calibration or operating performance in the standard 2TC series for:

- Overloads up to 6,000 amps at 28 VDC
- Overloads of 2,000–3,500 amps at 120 VAC, 400 Hz

Performance Characteristics		/\ Top	
Vibration	10G minimum, 50–500 Hz <i>(other vibration levels available)</i>		
Mechanical Shock	50G		
Acceleration	10G		
Weight	24 gram maximum (2TC14)		
Interrupt Current	1–20 amps: 6,000 amps at 28 VDC 25 amps: 1,625 amps at 28 VDC 1–15 amps: 2,500 amps at 120 VAC, 400 Hz 20 amps: 2,000 amps at 120 VAC, 400 Hz 25 amps: 1,800 amps at 120 VAC, 400 Hz		
Endurance	2,500 cycles: 120 VAC, 400 Hz inductive 5,000 cycles: 120 VAC, 400 Hz resistive 2,500 cycles: 30 VDC inductive 5,000 cycles: 30 VDC resistive 10,000 cycles: Mechanical, no load		

Calibration Chart For a Standard Device						/\ Top	
Temp.	Minimum Ultimate Trip	Maximum Ultimate Trip	Trip Time in seconds				
			200 %	500 %	1000 %		
25°C	115%	138%	4–16	0.40–1.60	0.10–0.40		
-54°C	115%	165%	7–35	0.60–3.00	0.15–0.70		
121°C	85%	145%	2–13	0.25–1.00	0.06–0.25		
<i>For others, please contact us.</i>							

Trip Curve		/\ Top	
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Approximate Time-Current Curves – 2TC Circuit Breakers

