

17AME+PTC Series

BI-METAL SELF-HOLD THERMOSTAT

17AME+PTC is a self-hold thermostat with PTC heater. It has both power cut and time delay functions. The self-hold function will keep the circuit open until the power supply was unplugged. It has both current and temperature sensitive features. The current sensitive self hold thermostat can cut the circuit in few seconds and hold the circuit open.

Features:

1. Power cutting and time delay protection, which means the thermostat will not reset until the power supply was unplugged.
2. Small size and has double protections of over current and temperature
3. Using high quality bimetal to ensure the protector can withstand normal circuit current
4. Adding PTC heater which has power cut and time delay functions
5. Complies with RoHS and REACH directives
6. Safer and more reliable.
7. Applicable to motor protection, especially for vacuum cleaner, grinder, juicer or paper shredder motors which need current sensitive and locked rotor protection.



Electrical Ratings:

1. 20A / 16V DC
2. 10A / 250V AC
3. 15A / 125V AC

Technical Specifications:

1. Off-temperature range 50°C - 180°C
2. Tolerance: +/-2°C, +/-3°C, +/-5°C

Applications:

Vacuum cleaner, mixer, grass cutter, grinder motors, electrical tools, small motors, and heating elements, some appliances, heating appliances and some small transformers

Certifications & Life Cycles:

Certification	Certificate Number	Life Cycles			
UL / CUL	E258612 / E309992	120VAC	6A	100,000 cycles	
		120VAC	20A	10,000 cycles	
VDE / CB	40017383 / DEI-34606	250VAC	10A	10,000 cycles	
		120VAC	20A	10,000 cycles	
CQC	CQC07002018912	250VAC	10A	10,000 cycles	

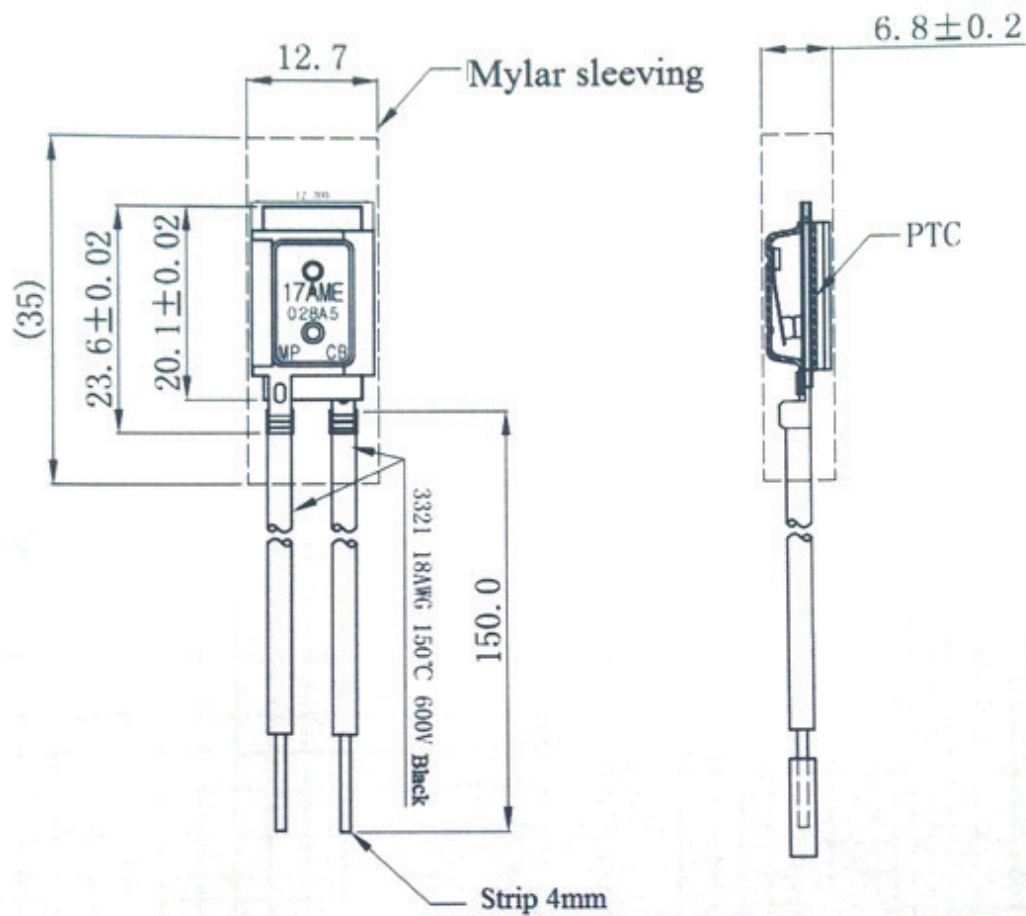
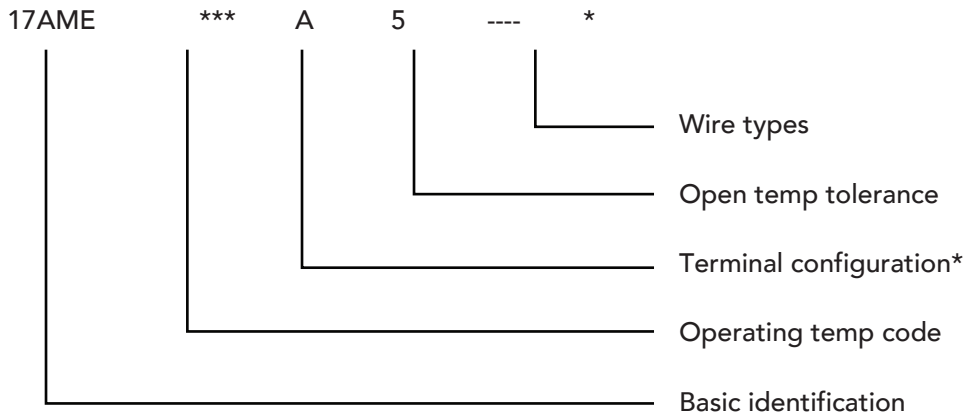


Phone: 330-966-3796
Fax: 330-408-7085
sales@calcoelectric.com
2381 Locust St. S., Unit #6
Canal Fulton OH, 44614
www.calcoelectric.com

17AME+PTC Series

BI-METAL SELF-HOLD THERMOSTAT

Nomenclature:



Phone: 330-966-3796
Fax: 330-408-7085
sales@calcoelectric.com
2381 Locust St. S., Unit #6
Canal Fulton OH, 44614
www.calcoelectric.com

17AME+PTC Series

BI-METAL SELF-HOLD THERMOSTAT

17AME Operating Temperature and Type Code

Operating Temp Code	Open Temp (°C)	Close Temp (°C)
17AME016A5	45	35
17AME017A5	50	38
17AME018A5	55	40
17AME019A5	60	42
17AME020A5	65	45
17AME021A5	70	50
17AME022A5	75	55
17AME023A5	80	57
17AME024A5	85	60
17AME025A5	90	62
17AME026A5	95	65
17AME027A5	100	67
17AME028A5	105	70
17AME029A5	110	72
17AME030A5	115	75
17AME031A5	120	78
17AME032A5	125	82
17AME033A5	130	85
17AME034A5	135	90
17AME035A5	140	93
17AME036A5	145	95
17AME037A5	150	100
17AME038A5	155	102
17AME039A5	160	105
17AME040A5	165	110
17AME041A5	170	115
17AME042A5	175	118
17AME043A5	180	120

*Close temp for reference only



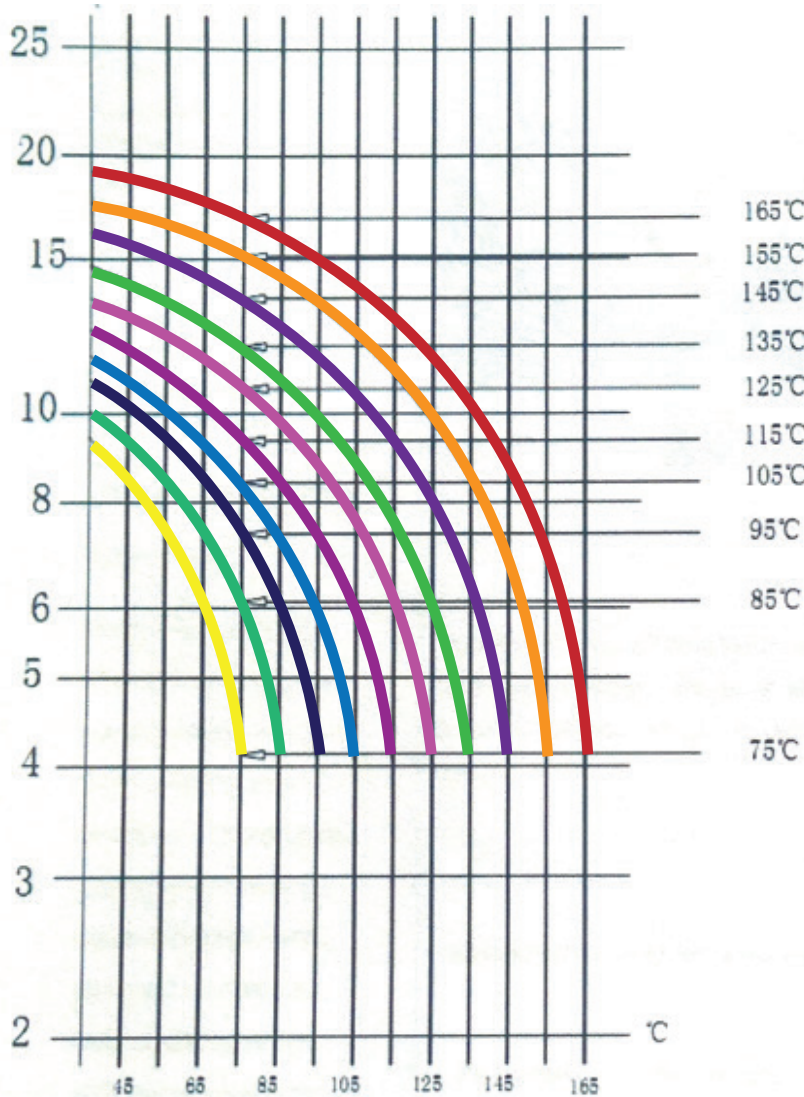
Phone: 330-966-3796
Fax: 330-408-7085
sales@calcoelectric.com
2381 Locust St. S., Unit #6
Canal Fulton OH, 44614
www.calcoelectric.com

17AME+PTC Series

BI-METAL SELF-HOLD THERMOSTAT

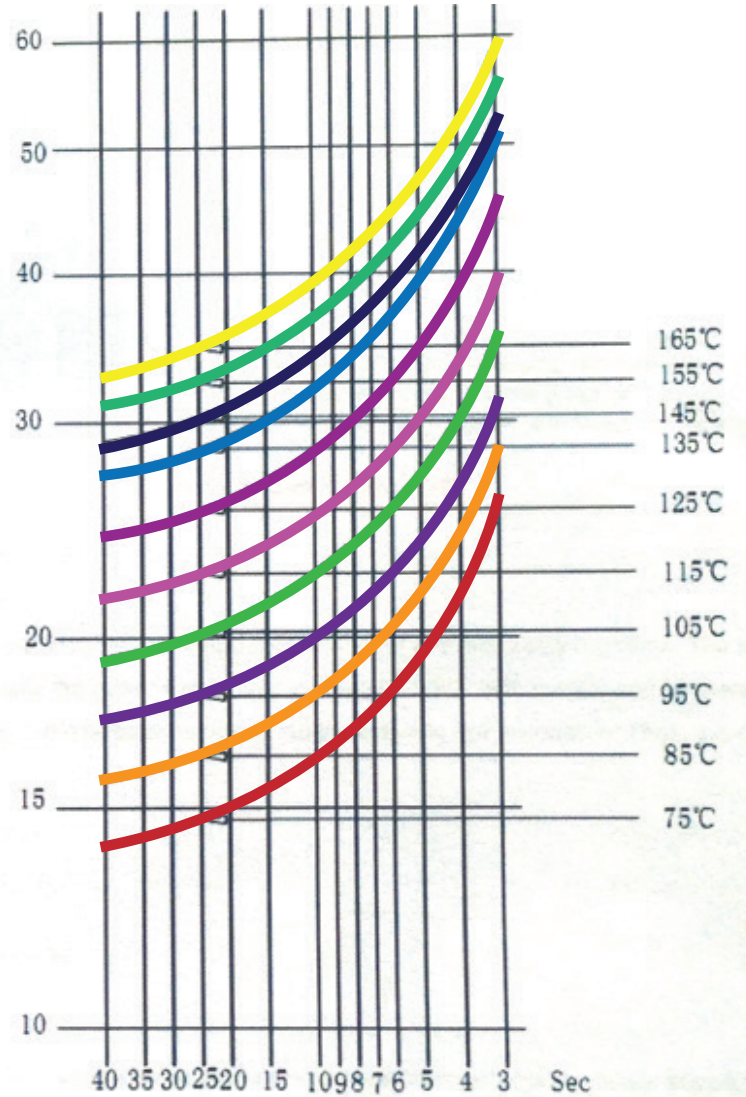
Temperature Current Tripping Time Curve

Ultimate Trip Current
VS. Protector Ambient Temperature
(Approx. - To be used for selecting samples only)



Temperature in Degrees Centigrade

Average First Cycle Tripping Time
VS. Current in 25°C Ambient
(Approx. - To be used for selecting samples only)



Tripping Time in Seconds



Phone: 330-966-3796
Fax: 330-408-7085
sales@calcoelectric.com
2381 Locust St. S., Unit #6
Canal Fulton OH, 44614
www.calcoelectric.com

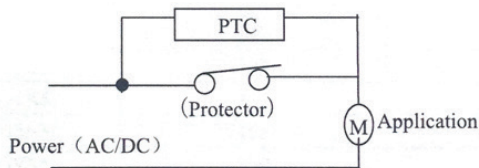
17AME+PTC Series

BI-METAL SELF-HOLD THERMOSTAT

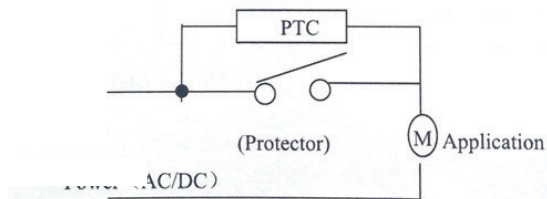
Design and Working Methods:

- A. The product has both over current and over temperature protections.
- a) Over current protection: When the current exceeds the prescribed value, the protector will cut the circuit in specified seconds to protect the application.
 - b) Over temperature protection: When the applications are overheated or operated abnormally, the heat will be conducted to bimetal which cause the temperature to reach the calibrated value. Then, the contacts of protectors will open and cut the circuit. When temperature is lowered down, the contacts will close again.
- B. The design of cutting circuit and time delay protection
Adding PTC heater to protectors

- a) Normal working condition: The protector is connected to PTC in parallel, then connected to Application in series. When the application is working normally, the current will flow through protector. PTC will not work.



- b) Time delay protection:



*When the application work abnormally, which cause the ambient temperature exceeds the prescribed value, the protector will open. Then, the current flow through PTC. Since PTC has a very high resistance, the current assigned to the application will be too low to start it. Meanwhile, the heat generated by PTC will remain the protector open until the power is unplugged.

* After the power is unplugged, the ambient temperature will decrease and then, the protector will close again.

Other Info:

1. The temperature increasing speed should be 1°C 12 minutes when conducting temperature calibration;
2. Vacuum varnish immersion is not recommended (can be specially designed):
 - * Impregnant painting might be suitable for no preheating coil is or similar usages;
 - * If pre-heating is necessary, please cool down the temperature below 70°C, then immerse into paintings under room temperature.
3. For some products with higher contact resistance, applying 60-100VAC, 2-5A, and heating outside of the product to make them action for 3 cycles, then re-measure the contact electrical resistance.



Phone: 330-966-3796
Fax: 330-408-7085
sales@calcoelectric.com
2381 Locust St. S., Unit #6
Canal Fulton OH, 44614
www.calcoelectric.com