

# TH10

## THERMAL CUT-OUT

### Introduction

Sensata Technologies has developed the TH10 temperature cut-out to respond to the need of increasing power of heating and personal care appliances. As a result of this, Sensata Technologies has further established its leading position in the worldwide thermal protection market.



### Key Benefits

- **Flexible Mounting:**  
3 Terminal Configurations Available
- **Robust Design:**  
The Bimetal Disc is Protected by the Metal Support
- **Full Automated Live:**  
Provides Stable Setting Value
- **Low Price:**  
The Particular Design Provides High Competitivity

### Applications

The TH10 operates as a sensitive power cut-out for:

- Hair dryers
- Fan heaters
- Convector heaters
- Transformers
- Hand dryers

and various other applications. With the TH10 Sensata Technologies provides you with cost-effective protection while offering superior quality and reliability.

### Design and Operating Principles

The TH10 consists of two nickelplated supports, held together with ceramic pins. One support holds the high performance Klixon® bimetal disc, which, in combination with the sophisticated contact system, provides superior cycling performance. For self-hold versions see TH11/21. A wide temperature range, standard 5K tolerance, different bimetal resistivity, plus optional terminal configurations make the TH10 suitable for a very wide range of applications.

The operating principle of the TH10 is simple and effective. A current flows through the resistive Klixon® bimetal disc. When a fault condition occurs, the increased ambient temperature causes the bimetal disc to snap open the contacts. As the device cools down to a safe temperature again, the contacts will automatically reset.

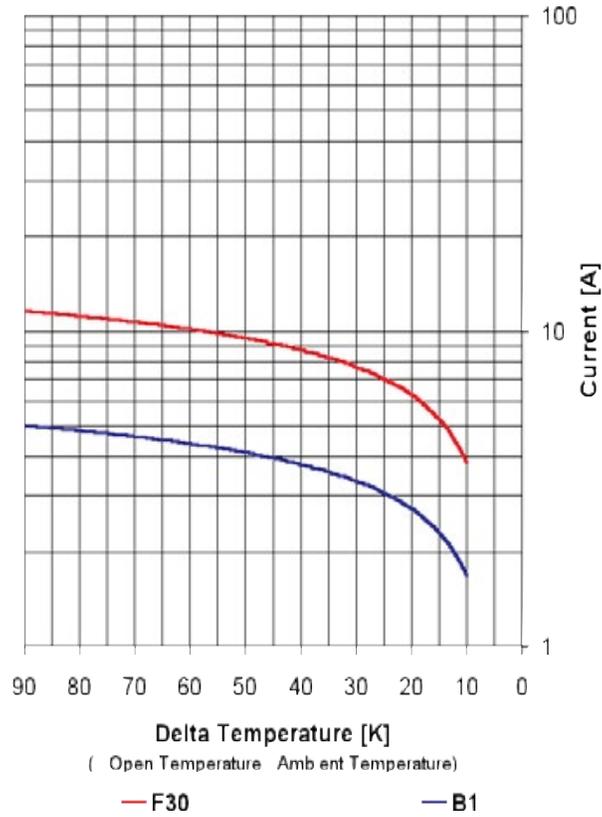
<b>Standard Operating Temperature Range</b>	From 45°C to 170°C
<b>Max. Ambient Temperature</b>	200°C
<b>Tolerance on Open Temperature</b>	±5K

## Declarations

<b>Declarations to EN60730-2-9</b>		<b>Declarations to EN60730-2-2</b>
<b>Purpose of the Control</b>	Thermal Cut-Out	Thermal Motorprotector
<b>Construction</b>	Incorporated, non-electric	
<b>Degree of Protection</b>	IP00	
<b>Terminals for Ext. Conductors</b>	For internal conductors only	
<b>Method of (Dis)Connection of Terminals</b>	Riveting, soldering, spotwelding, springloaded contacting	
<b>Details for Terminals for Internal Conductors</b>	Insulation of conductors used by OEM's must be able to withstand the operating temperatures in normal usage	
<b>Temperature Limits of the Switchhead</b>	200°C	
<b>PTI of Insulation Materials</b>	PTI 250	PTI 250
<b>Method of Mounting</b>	By various means in conjunction with (holes in) terminals, such that adequate creepage and clearance distances are maintained between live parts and accessible metal parts	By various means in conjunction with (holes in) terminals, such that adequate creepage and clearance distances are maintained between live parts and accessible metal parts
<b>Operating Time</b>	For continuous operation	
<b>Type of Action</b>	Type 2B	Type 3C
<b>Reset Characteristic</b>	Automatic	Automatic
<b>Extent of Sensing Element</b>	Whole control	
<b>Control Pollution Degree</b>	Degree 2	Degree 2

### Ultimate Trip Current vs. Ambient Temperature (non-circulating air)

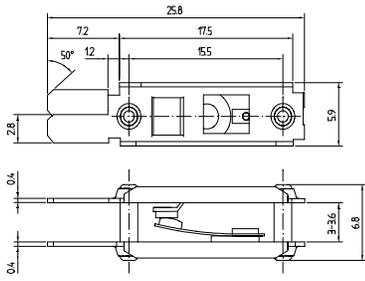
Approx. to be used for selecting samples for verification tests



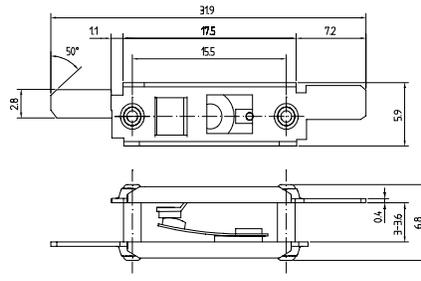


# DIMENSION AND TYPES

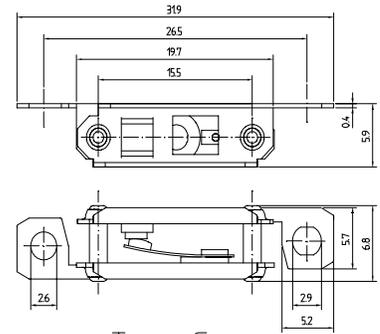
Dimensions in mm



Type A



Type B



Type C



Terminals on Opposite End (With Holes), Nickel Plated Steel, Standard Operating Temp 95°C, Low Resistivity Bimetal Disc (F30) 101, High Resistivity Bimetal Disc (B1) 105)

Product Line **TH10 - X - Y - Z**

Terminal Configuration

Code	Max. Ambient Temperature
A	Terminals on Same End
B	Terminals on Opposite End
C	Terminals on Opposite End (with holes)

Disc and Contact Support Material

Code	Material
A	Nickel Plated Steel

Standard Opening Temperature

Operating Temp.	Low Resistivity Bimetal Disc. (F30)	High Resistivity Bimetal Disc. (B1)
60°C	031	035
65°C	041	045
70°C	051	055
75°C	061	065
80°C	071	075
85°C	081	085
90°C	091	095
95°C	101	105
100°C	111	115
105°C	121	125
110°C	131	135
115°C	141	145
120°C	151	155
125°C	161	165
130°C	171	175
135°C	181	185
140°C	191	195
145°C	201	205
150°C	211	215
170°C		255



## AGENCY APPROVALS & CERTIFICATIONS

<b>Agency</b>	ENEC
<b>File Number</b>	2014531.14
<b>Rating</b>	13(2)A 250 Vac @ 30.000 cycles, 30(5)A 250 Vac @ 3.000 cycles
<b>Standard</b>	EN60730-2-9, EN60730-2-2, EN60730-1



<b>Agency</b>	UL
<b>File Number</b>	E54813

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