2MM

Motor Protector/Thermal Cut-Out

Introduction

Sensata Technologies builds the 2MM motor protector to meet almost any requirement of protection in a wide range of small motors, small transformers, solenoids, etc.. This compact motor protector is the best solution to protect the wide variety of motors used in industrial and domestic appliances against locked rotor and overload situations.

Design and Operating Principles

The motor protector 2MM consists of a metal housing that holds and protects the inner components against infiltration as well as mechanical deformation.

The can contains the calibrated Klixon® disc carrying a silver contact. The fixed contact is placed on the opposite side, separated from the terminal by an insulator. The 2MM is available in two versions: with epoxy insulation and with additional sleeve.

The operating principle of the 2MM is both simple and effective. A current flows through the resistive Klixon® bimetal disc. When a fault condition occurs, the increased current and ambient temperature make the bimetal disc snap open the contacts. The contacts close again automatically as the device cools down to a safe running temperature.

Applications

The 2MM operates as a sensitive safety cut-out for applications like:

- Small motors
- Coils
- Solenoid valves
- Transformers

In single phase motors it can be mounted directly in the main circuit to serve as on- or in-winding protector. It's compact size provides ease of installation, even in small spaces. At this time there is practically no small motor the 2MM cannot protect against overheating and overloading. Sensata Technologies 2MM provides you with a cost effective solution in terms of maximum quality and reliability.

SPECIFICATIONS

Standard Operating Temperature Range	from 70°C - 160°C in 5K steps
Tolerance on Open Temperature	± 10K (UL type ±5, ±7)
Max. Ambient Temperature 175°C	175°C
Differential	20K minimum

TECHNICAL SPECIFICATIONS

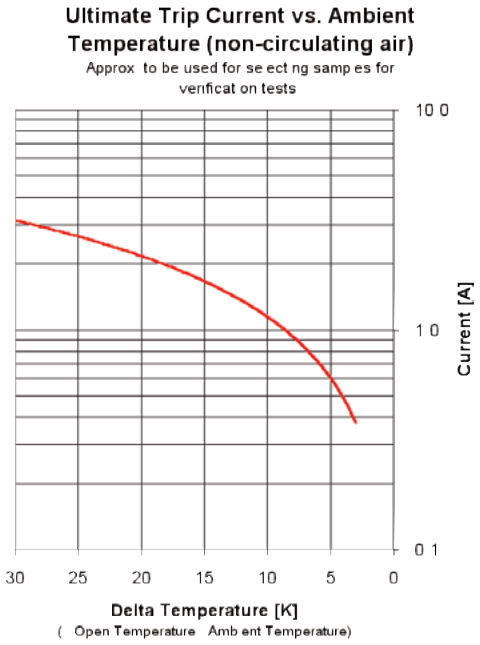
Declarations

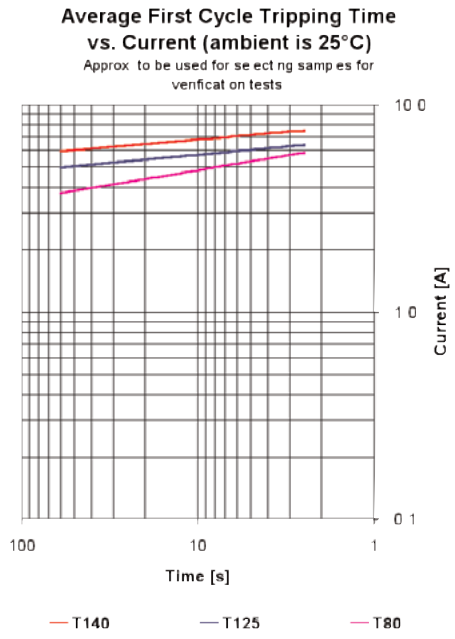
Declarations to EN60730-2-9		Declarations to EN60730-2-2 / EN60730-2-3
Purpose of the Control	Thermal Cut-Out	Thermal Motorprotector / Thermal Ballast Protector
Construction	Incorporated, non electric	
Degree of Protection	IP00	
Terminals for Ext. Conductors	For internal conductors only	
Temperature Limits of the Switchhead	175°C	
PTI of Insulation Materials	PTI 250	PTI 250
Method of Mounting	On-winding or by special means in the appliance	On-winding or by special means in the appliance
Operating Time	For continuous operation	
Type of Action	Type 2B	Type 3C / Type 2C
Reset Characteristic	Automatic	Automatic
Extent of Sensing Element	Whole control	
Control Pollution Degree	Epoxy version: Degree 3 Naked version: Degree 1	Epoxy version: Degree 3 Naked version: Degree 1

Maximum Contact Rating

7.0 (2.0) A 250 Vac (3.000 cycles)

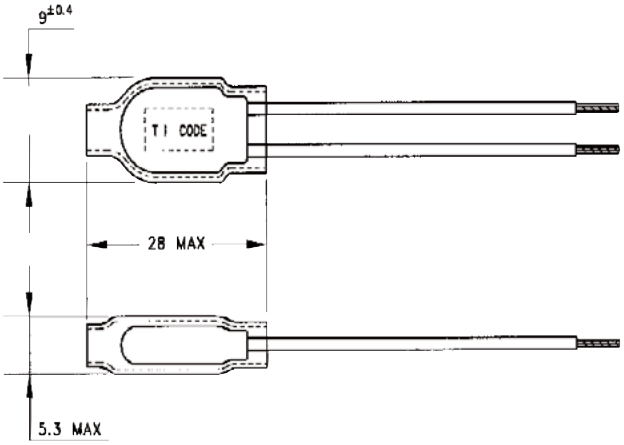
Curves

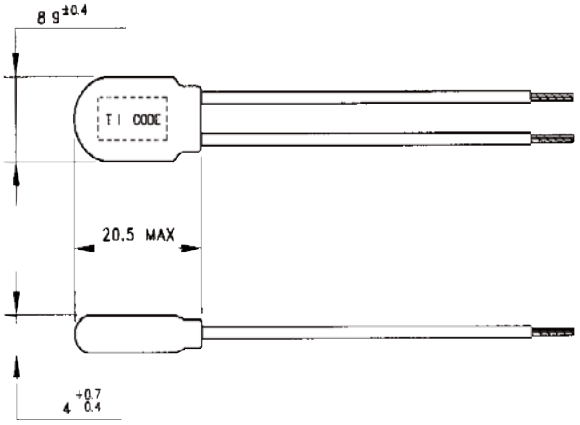




DIMENSIONS

Dimensions in mm [Inch]





ORDERING OPTIONS

Example : (*)2MMT/F XXX YYY

(*)2MMT/F **XXX** **YYY**

Family

Blank: Epoxy or Sleeving Epoxy Provided
N: Naked, No Epoxy or Sleeve Provided
NS: Naked, No Epoxy, but with Sleeve Provided
C: Naked, Sealed in Housing Provided

Standard Opening Temperature

70, 75, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 145, 150, 155, 160

Wire Lead Code**

**** Size and length on customer request**

(*)2MMT: Open Temperature Tolerance ±7K, ±10K
(*)2MMF: Open Temperature Tolerance ±5K

Available also: Doublet and Triplet types

AGENCY APPROVALS & CERTIFICATIONS

Agency	File Number	Standard	Note
UL / C-UL	E 15962	UL2111 / CSA C22.2 No. 77	Motor Protecting Device
ENEC	2014531.06	EN60730-2-9	Thermal Cut-Out
ENEC	2014531.06	EN60730-2-2	Thermal Motor Protector
ENEC	2014531.06	EN60730-2-3	Thermal Ballast Protector

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