Product Bulletin

2MM

Motor protector/Thermal cut-out

Texas Instruments 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.

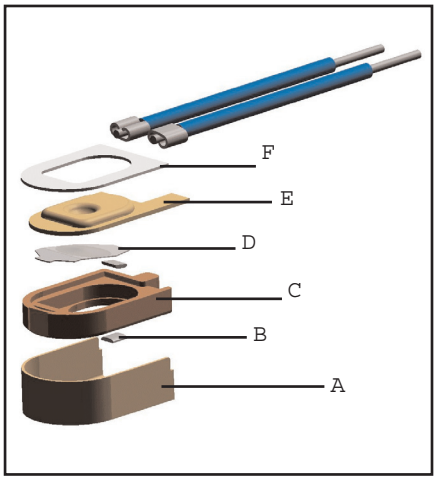
Applications
The 2MM operates as a sensitive power cut-out for applications like:

- 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. Texas Instruments 2MM provides you with a cost effective solution in terms of maximum quality and reliability.

Key Benefits

- Field proven reliable and repeatable snap-action bimetal actuation
- Low profile shape for close coupling to on- or in-winding application
- On customers request additional sleeve
- Competitive performance-price ratio



A: Can

B: Silver contact

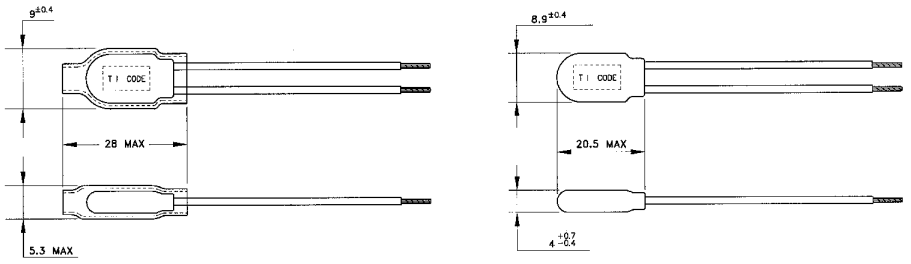
C: Plastic insulator

D: Calibrated Klixon™ snap-action bimetal disc

E: Cup

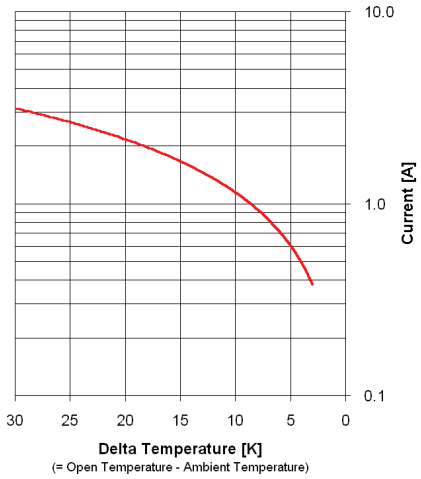
F: Insulator

Dimensions (mm)



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

Approx. to be used for selecting samples for verification tests.



Coding System

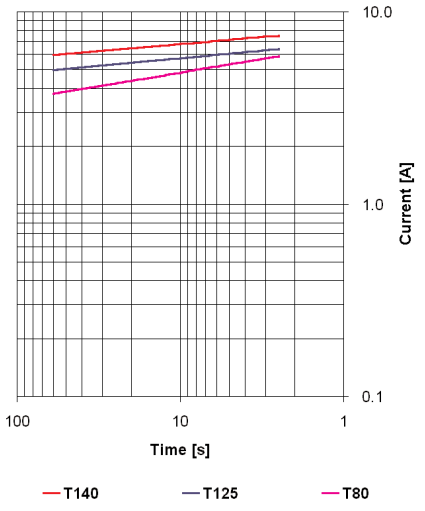
2MMT XXX YYY

Standard opening temperature				Wire lead code*
70	100	130	160	
75	105	135		
80	110	140		
85	115	145		
90	120	150		
95	125	155		

* Size and length on customer request

Average First Cycle Tripping Time vs. Current (ambient is 25°C)

Approx. to be used for selecting samples for verification tests.



Specifications

Standard operating temperature range	from 70°C - 160°C in 5K step
Tolerance on open temperature	± 10K
Max. Ambient temperature	175°C
Differential	20K minimum

Maximum contact rating

4.0 (1.5) Amp 250 Vac (3.000 cycles)

Certifications

Agency	File number	Standard	Note
UL	E 15962	UL2111	Motor protecting device
ENEC	2014531.06	EN60730-2-9	Thermal Cut-Out
ENEC	2014531.06	EN60730-2-2	Thermal Motor Protector
CSA	LR11372	CSA-C22.2 N° 0-M91	Motor controller

Declarations

Declarations to EN60730-2-9	Declarations to EN60730-2-2
Purpose of the control……Thermal cut-out	Purpose of the control……Thermal Motorprotector
Construction……Incorporated, non-electronic	
Degree of protection……IP00	
Terminals for ext. conductors.For internal conductors only	
Temperature limits of the switchhead……175°C	
PTI of insulation materials……Int.: PTI 175 Ext.: PTI 250	PTI of insulation materials……Int.: PTI 175 Ext.: PTI 250
Method of mounting…… On-winding or by special means in the appliance	Method of mounting…… On-winding or by special means in the appliance
Operating time……For continuous operation	
Type of action……Type 2C	Type of action……Type 3C
Reset characteristic……Automatic	Reset characteristic……Automatic
Extent of sensing element….Whole control	
Control pollution degree……Dirty	Control pollution degree……Dirty

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