Sensata Technologies

7MP

Motor Protector

KEY BENEFITS

Provides higher level of safety for appliances having free access to rotating parts

Minimizes the total cost of the motor protection function

Guarantees to pass the UL 18 days locked rotor test in combination with high currents

Assures maximum protection under locked rotor conditions

Provides mounting flexibility, terminal configurations can be made according to customer requirement

Varying of both bimetal and S-wire resistivity creates a current-time characteristic optimized for each specific application

Unique combination of bimetal disc and resistivity wire guarantees very precise tripping times thus prevents too high motor temperature

Lead wire is optional that crimpped to terminal

Soldering solution with Tin-plating terminal

As world leader in appliance motor protection, Sensata Technologies has developed the 7MP for 120 and 250Vac applications to operate in wider temperatures and current ranges than offered by existing protection solutions. In providing consistent performance characteristics and excellent reliability, its features anticipate future technical protection requirements on the AC motor market.

Design & operating principles

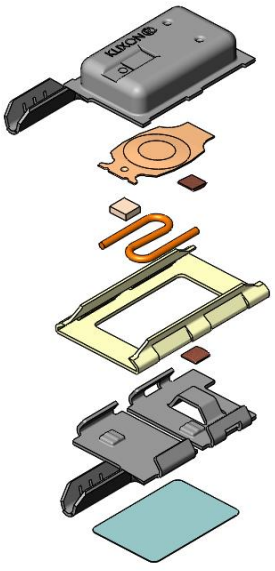
The 7MP consists of a metal housing with an integrated terminal. The housing holds the pre-set Klixon® snap action bimetal disc. The split plate carries a resistive S-shaped wire which provides additional current sensitivity. The advanced contact system - one on the bimetal disc and one on the plate - in combination with the strong disc guarantees a long life and reliable cycling. The combination of a variety of standard terminal configurations and carefully selected materials provides easy handling and mounting. Customized terminal configurations are available on request. Wires including connectors can be automatically attached to the standard crimp terminal. Sensata Technologies supplies a range of standard lead configurations; customized solutions are available on request. In construction where the 7MP device is contacting conductive parts of the motor assembly, Sensata Technologies can deliver the devices with a Mylar™ insulation sleeve. Customized coding and coloring of the coding tape is an option on request. The operating principle of the 7MP is both simple and effective.

The protector is actuated by current passing through it and by the heat received from the surrounding parts.

The electrical circuit is interrupted when the disc reaches its pre-set temperature. As the device cools down to a safe temperature, the contacts will automatically reset. The bimetal disc provides excellent thermal and current sensitivity in an overload situation. Under locked rotor conditions the integrated heater in combination with the bimetal disc provide very accurate trip times for maximum protection.

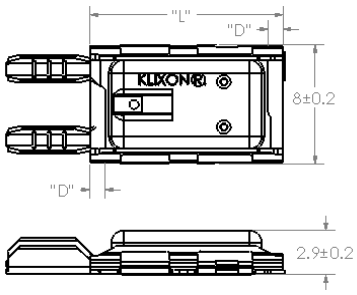
Applications

The 7MP is widely used throughout the world in electric motors for washing machines, dishwashers, dryers, vacuum cleaners and industrial applications in the 120 and 250Vac applications. 7MP features permit to move the motor protector location outside the winding, providing the motor manufacturer extra flexibility during the manufacturing process. The recent certification as a thermal cut-out device combined with its unique current sensitivity, positions the 7MP as an advanced and cost effective solution to protect toroidal transformers.



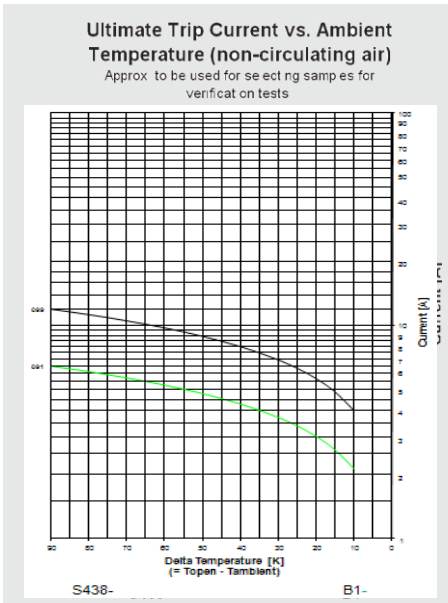
Dimensions

L: 12.7mm
D: 1.0 mm

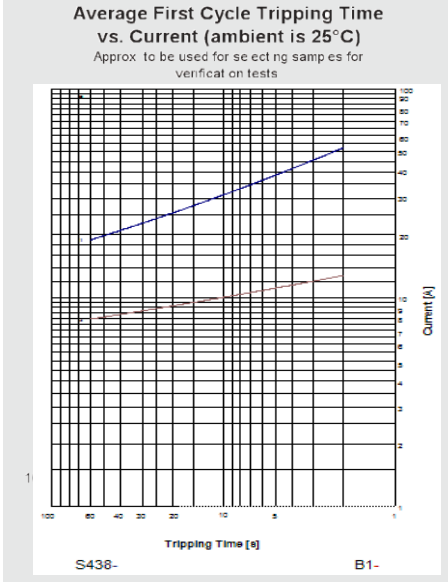


Protector ratings

Contact rating	
250Vac/6A@cos0.7 120Vac/10A@cos0.7	3000cycles



The curves of First Cycle Tripping time and Ultimate trip current are meant to be for selecting samples to perform verification tests only. In the figures two curves of a wide range of possibilities are shown. The level and slope can be varied by making another selection for the pre-set temperature, bimetal disc and/or heater.



Declarations

Declarations to EN60730-2-2
Purpose of the control…….Thermal Motorprotector Construction……..Incorporated, non-electronic Degree of protection……IP00 Terminals for ext. conductors.For internal conductors only Method of (dis) connection of terminals……Soldering, spotwelding Temperature limits of the switchhead……..……..170°C PTI of insulation materials……PTI 175 Method of mounting……. Off-winding, fixed position, no mounting limitation Type of action……..……Type 3C Reset characteristic……Automatic Control pollution degree……..Degree 1

Specifications

Standard operating temperature range (Increments 5K)	From 80°C - 170°C
Tolerance on open temperature	± 5K
Peak temperature (5 min)	200°C
Max. Ambient temperature	T-open +20°C
Time check at T-ambient 25°C	4 to 10 seconds

Certificate

CQC Certificate No.:12002080966(No. is confirming).

UL Certificate No.: 20140214-E15962(UL2111, CSA C22.2 No. 77).

ENEC Certificate No: 2166687.01(EN60730-2-2).

TECHNICAL / SALES SUPPORT

Holland
Phone +31 546 879560 Fax +31 546 879204
Italy
Phone +39 039 6568310 Fax +39 039 6568316

Internet: *www.sensata.com*

Email: *info-cpe@list.sensata.com*