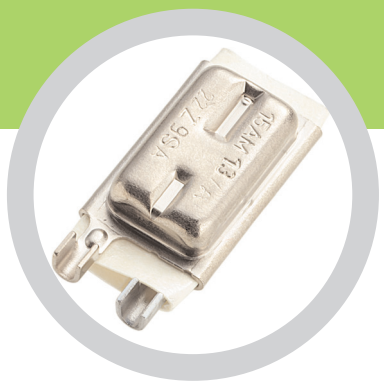
Sensata Technologies



15AM

Motor Protector/Thermal Cut-Out

KEY BENEFITS

Sensata Technologies Engineering knowledge base

Provides mounting flexibility

European supply

Competitive price

Local Engineering

Certifications

Agency	File number	Standard	Rating
ENEC	2014531.04	EN60730-2-9 Thermal Cut-Out	13 (5) A 250Vac / 10.000 cycles
ENEC	2014531.04	EN60730-2-2 Thermal Motor Protector	
UL / C-UL	E 15962	UL2111/CSA C22.2 No.77	

Specifications

Standard operating temperature range	from 65°C - 170°C
Tolerance on open temperature	± 5K
Maximum Ambient temperature	180°C
Maximum terminal temperature	185°C

KLIXON®

As world market leader in appliance motor protection Sensata Technologies builds the 15AM motor protector to meet almost any application in this field. The 15AM is designed to provide locked rotor and overload protection in a wide variety of motors for industrial and domestic appliances. The 15AM is a leader in the European AC motor protection market.

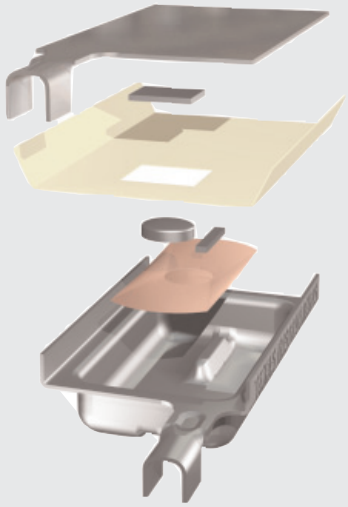
Design & operating principles

In the 15AM design the nickel plated shell holds and protects the inner components against varnish penetration and mechanical forces. The heart of the device is the calibrated Klixon® bimetal disc, responding to current and temperature changes. It is supported by a slug and a contact welded on the disc. The fixed contact is placed on the opposite nickel-zinc coated plated steel shell, separated by a coated gasket for insulating and sealing. The 15AM can be supplied as a basic device with leads and other integrated quick connectors or automated connection systems. Customized lead configurations are available on request. The 15AM can be fitted in the best possible mounting location in combination with the optimum assembly operation. As the 15AM is a metal device it may be necessary to insulate the device from other conductive parts. An insulating sleeve is available on request.

The operating principle of the 15AM is both simple and effective. A current flows through the resistive Klixon® bimetal disc. When a fault condition occurs, the increased current and shell temperature heats up the bimetal disc which snaps and opens the contacts. As the device cools down to a safe temperature, the contacts will automatically reset.

Applications

The 15AM operates as an incorporated thermal sensitive protector in electric motors for pumps, washing machines, dish washers, dryers, vacuum cleaners, fans, battery chargers and microwave ovens.



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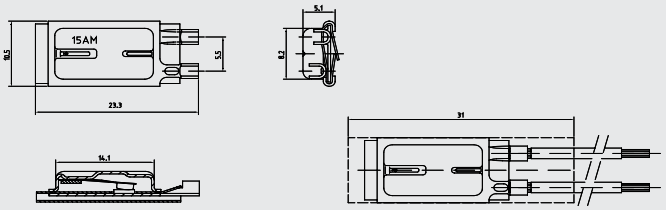
Dimensions (mm)



Coding System

15AM **345** **A** **034** **A**

Sealing	
Code	Type
A	Standard
B	Hotmelt sealed

Standard Lead coding	
Length (mm)	Code
55	031
60	032
65	033
70	034
75	035
80	036
90	037
100	038
110	039
125	040
140	041
160	042
180	043
210	044
240	045
Others on request	

Sleeve coding	
Code	Type
A	Standard
	No sleeve

Standard opening temperature

Specific Bimetal resistivity		30		70		100		250		500		850	
Nominal differential**		20 K	45 K	20 K	45 K	20 K	45 K	20 K	45 K	20 K	45 K	20 K	45 K
Opening Temp*	65°C	006		305		007		008		009			
	70°C	011		310		012		013		014			
	75°C	016		315		017		018		019			
	80°C	021		320		022		023		024			
	85°C	026		325		027		028		029			
	90°C	036		335		037		038		039			
	95°C	046		345		047		048		049		050	
	100°C	056	061	355	360	057	062	058	063	059	064	060	065
	105°C	071	076	370	375	072	077	073	078	074	079	075	080
	110°C	086	091	385	390	087	092	088	093	089	094	090	095
	115°C		106		405		107		108		109		110
	120°C		121		420		122		123		124		125
	125°C		136		435		137		138		139		140
	130°C		151		450		152		153		154		155
	135°C		166		465		167		168		169		170
	140°C		181		480		182		183		184		185
	145°C		196		495		197		198		199		200
	150°C		211		510		212		213		214		215
	155°C				520		222		223		224		
	160°C				530		232		233		234		
	165°C				540		242		243		244		
	170°C				550		252		253		254		

* Opening temperature tolerance ± 5K

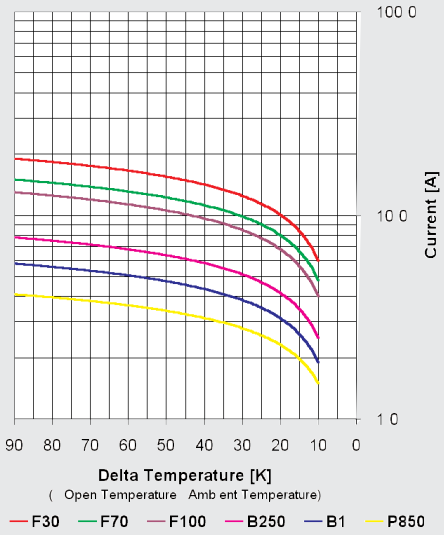
** Nominal differential equals nominal opening temp. minus nominal closing temp.
Tolerance on closing temperature: 20K differential ± 10K
45K differential ± 15K

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	180°C		
PTI of insulation materials	PTI 175	PTI of insulation materials	PTI 175
Method of mounting	Inserting, clamping, bracketing or the like	Method of mounting	Inserting, clamping, bracketing or the like
Operating time	For continuous operation		
Type of action	Type 2C (T-open) Type 1C (T - close)	Type of action	Type 3C
Reset characteristic	Automatic	Reset characteristic	Automatic
Extent of sensing element	Whole control		
Control pollution degree	Degree 2	Control pollution degree	Degree 2

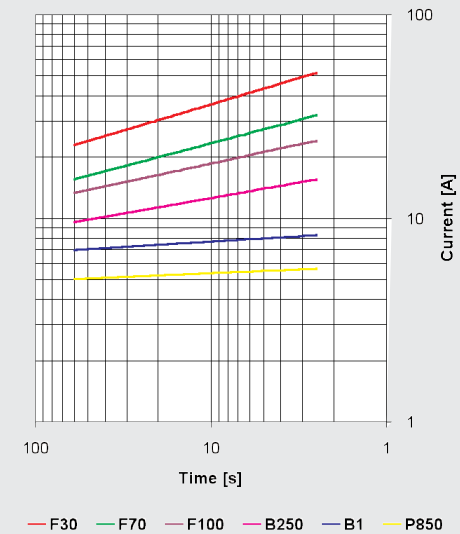
Ultimate Trip Current vs. Ambient Temperature (non-circulating air)

Approx to be used for se ect ng samp es for verificat on tests



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

Approx to be used for se ect ng samp es for verificat on tests



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