



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.

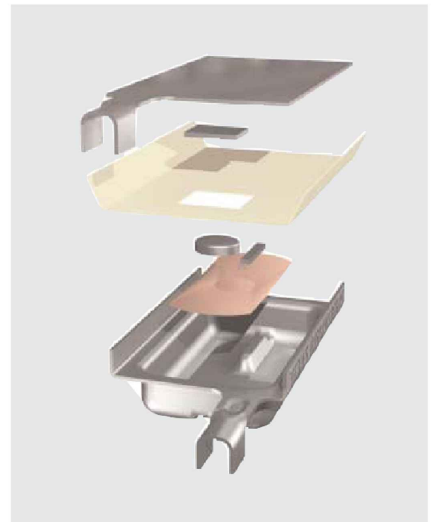
Design & operating principles

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.

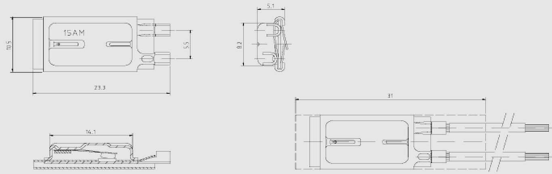
Applications

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.





Dimensions (mm)



Coding System

15AM	345	A	034	A																																																							
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Specific Bimetal resistivity	Standard opening temperature											
	30		70		100		250		500		850	
	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	009	009	009	009	009	009
	70°C	011	310	012	013	014	014	014	014	014	014	014
	75°C	016	315	017	018	019	019	019	019	019	019	019
	80°C	021	320	022	023	024	024	024	024	024	024	024
	85°C	026	325	027	028	029	029	029	029	029	029	029
	90°C	036	335	037	038	039	039	039	039	039	039	039
	95°C	046	345	047	048	049	049	049	049	049	049	049
	100°C	056	061	355	062	058	063	059	064	060	065	065
	105°C	071	076	370	072	077	073	078	074	079	075	080
	110°C	086	091	385	087	092	088	093	089	094	090	095
	115°C	106		405	107	108	108	109	109	110	110	110
	120°C	121		420	122	123	124	124	124	124	124	124
	125°C	136		435	137	138	139	139	140	140	140	140
	130°C	151		450	152	153	154	154	155	155	155	155
	135°C	166		465	167	168	169	170	170	170	170	170
	140°C	181		480	182	183	184	184	184	184	184	184
	145°C	196		495	197	198	199	200	200	200	200	200
	150°C	211		510	212	213	213	214	214	214	214	214
	155°C			520	222	223	224	224	224	224	224	224
	160°C			530	232	233	234	234	234	234	234	234
	165°C			540	242	243	244	244	244	244	244	244
	170°C			550	252	253	254	254	254	254	254	254

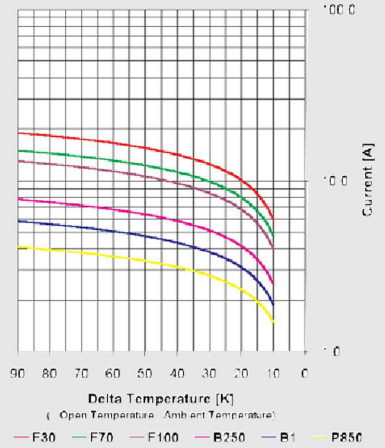
* Opening temperature tolerance ± 5K
 ** Nominal differential equals nominal opening temp. minus nominal closing temp.
 Tolerance on closing temperature: 20K differential ± 10K
 45K differential ± 16K

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 selecting samples for verification tests



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

Approx. to be used for selecting samples for verification tests

