



MA10

Thermal Cut-Out

Since 30 years the Sensata Technologies MA10 temperature cut-out is providing a reliable protection in a variety of small domestic and personal care appliances. The MA10 has set the world standard in the field of open type temperature cut-outs.

Design and operating principles

The Klixon® bimetal disc with welded-on contact is the heart of the MA10. It is welded on the upper terminal which is riveted to the plastic base. The lower terminal carries the stationary contact and is also riveted to the phenolic base.

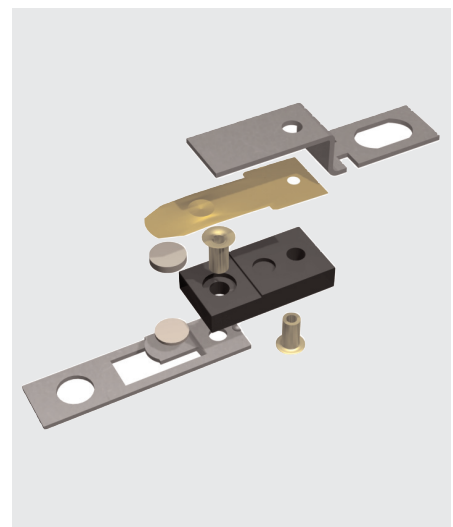
The operating principle of the MA10 is both simple and effective. Its open structure allows optimum thermal response. When a fault condition occurs, the increased ambient temperature causes the Klixon® bimetal disc to snap open the contacts. As the device cools down to a safe temperature again, the contacts will automatically reset. The MA10 is available with a wide range of calibrated pre-set operating temperatures (with varying tolerances). Since the current flows through the bimetal disc, changing the bimetal resistivity makes it possible to vary the product's current sensitivity. A high, middle and low current-sensitive bimetal disc is available at no additional charge.

Applications

The MA10 is a temperature-sensitive safety cut-out for applications like:

- Electric room heaters
- Hair dryers
- Hand dryers
- Hair curlers

Due to its compact design, the MA10 can be mounted easily and with its wide range of operating temperatures and tolerances it provides cost-effective and reliable protection.



KEY BENEFITS

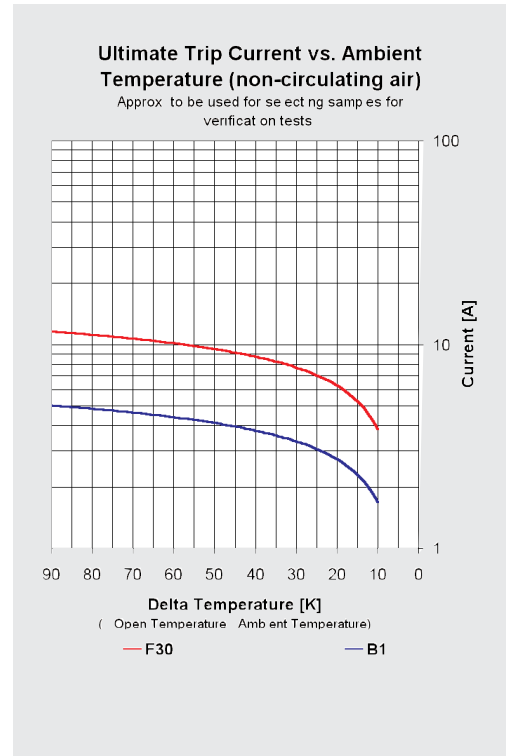
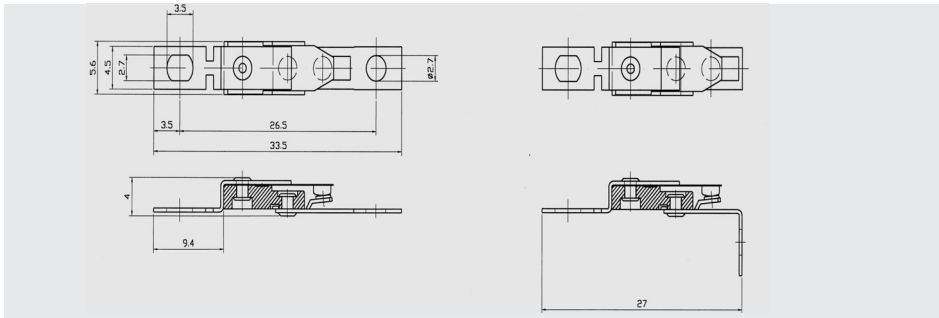
Small Size

Fast thermal response

Bimetal disc exposed

Low cost

KLIXON
®



Coding System

MA10 AA - 031 - 1

| Terminal Configuration | | Standard opening temperature | | | | Opening Temp. tolerance | |
|------------------------|-------------------------|------------------------------|------------------------------------|--------------------------------------|--------------------------------------|-------------------------|--------|
| Code | Terminals | Operating Temp. | Low resistivity bimetal disc (F30) | Medium resistivity bimetal disc (B1) | High resistivity bimetal disc (P850) | | |
| AA | Both terminals straight | 60°C | 056 | 060 | 058 | 3 | ± 15K |
| | | 65°C | 096 | 100 | 098 | 2 | ± 10K |
| | | 70°C | 071 | 075 | 073 | 1 | ± 7.5K |
| | | 75°C | 051 | 055 | 053 | | |
| | | 80°C | 091 | 095 | 093 | | |
| | | 85°C | 061 | 065 | 063 | | |
| | | 90°C | 021 | 025 | 023 | | |
| | | 95°C | 031 | 035 | 033 | | |
| | | 100°C | 026 | 030 | 028 | | |
| | | 105°C | 016 | 020 | 018 | | |
| | | 110°C | 036 | 040 | 038 | | |
| | | 115°C | 041 | 045 | 043 | | |
| | | 120°C | 001 | 005 | 003 | | |
| | | 125°C | 081 | 085 | 083 | | |
| | | 130°C | 011 | 015 | 013 | | |
| | | 135°C | 006 | 010 | 008 | | |
| | | 140°C | 066 | 070 | 068 | | |
| | | 145°C | 076 | 080 | 078 | | |
| | | 150°C | 046 | 050 | 048 | | |

Specifications

| | |
|--------------------------------------|------------------------|
| Standard operating temperature range | from 60°C - 150°C |
| Tolerance on open temperature | ± 5K/±7.5K/± 10K/± 15K |
| Max. Ambient temperature | 150°C |

Declarations

| Declarations to EN60730-2-9 | |
|---|---|
| Purpose of the control | Thermal Cut-Out |
| Construction | Incorporated, non-electronic |
| Degree of protection | IP00 |
| Terminals for ext. conductors | For internal conductors only |
| Method of (dis) connection of terminals | Riveting, soldering, spotwelding |
| Temperature limits of the switchhead | 150°C |
| PTI of insulation materials | PTI 250 |
| Method of mounting | By various means in conjunction with (holes in) terminals, such that adequate creepage and clearance distances are maintained between live parts and accessible metal parts |
| Operating time | For continuous operation |
| Type of action | Type 2C |
| Reset characteristic | Automatic |
| Extent of sensing element | Whole control |
| Control pollution degree | Degree 2 |

Certifications

| Agency | File number | Standard | Rating A-res (A-ind. @ PF=0.6) V / cycles |
|-----------|-------------|--------------------------------|--|
| ENEC | 2014531.12 | EN60730-2-9 Thermal Cut-Out | 12(0) 250 / 10.000 |
| UL / C-UL | E54813 | UL873 | 9(0.5) 250 / 10.000 18(0.75) 125 / 6.000 |