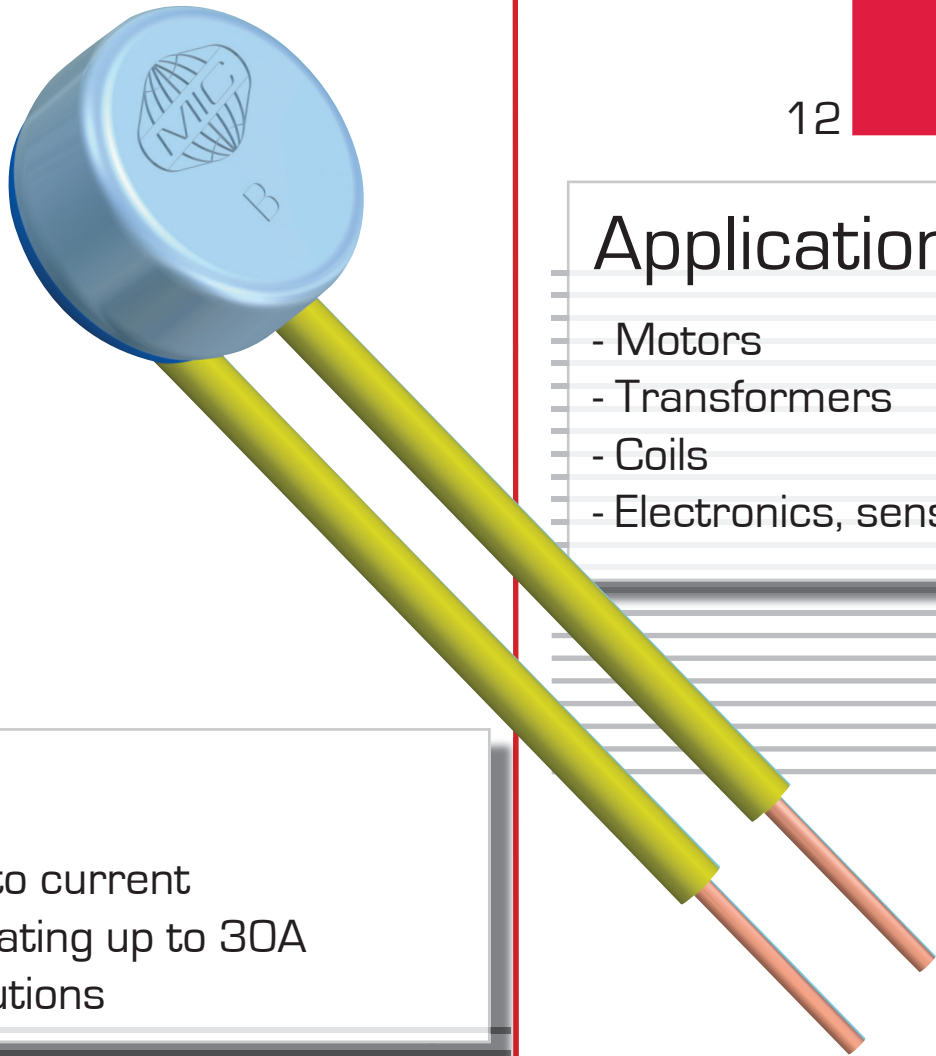


Thermal motor protector
Temperature limiter
Thermal cut-out

B

12

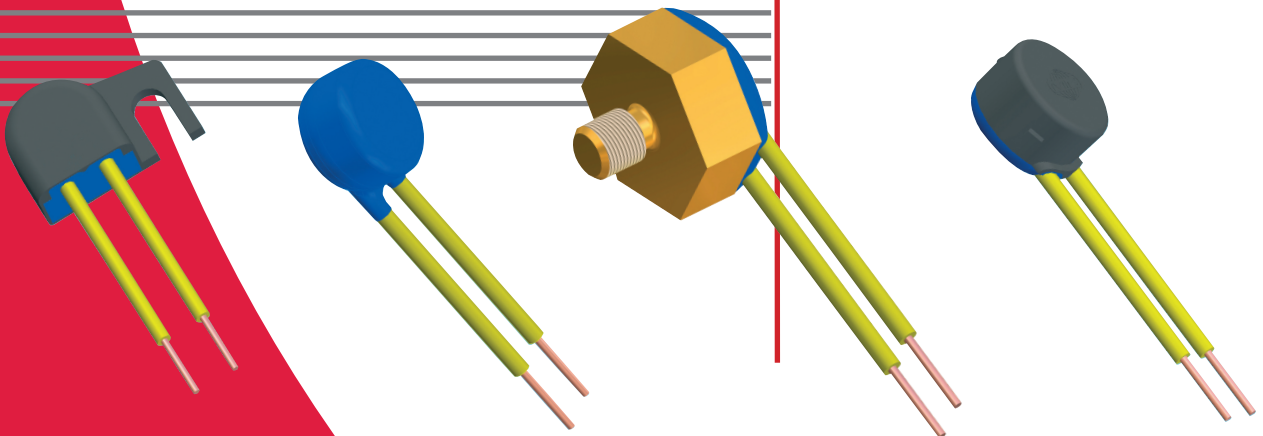


Applications

- Motors
- Transformers
- Coils
- Electronics, sensors





Benefits

- Non-sensitive to current
- High current rating up to 30A
- Manifold executions



CANTHERM

Technical data

| ratings | | control type | | B12A / E | | | B12B / G |
|-------------------------------------------------------------|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------------|---------------|----------|----------|
| | | normally closed | | | normally open | | |
| version | | normally closed | | | normally open | | |
| rated current at 250 V 50/60 Hz (power factor 0.95 / 0.6) | | 6.3 A / 4.0 A | 10.0 A / 6.0 A | 13.0 A / 2.1 A | 5.0 A / 1.6 A | | |
| switching cycles | | 10,000 | 5,000 | 1,000 | 5,000 | | |
| max. current at 250 V 50/60 Hz (power factor 0.95) | | 30.0 A | | | | | |
| switching cycles under max. current | | 100 | | | | | |
| temperature rating Ta (steps in 5 K) | | 70 °C ... 160 °C | | | | | |
| tolerances | | Standard: ± 5 K | | | | | |
| feature of automatic action | | 1.B.M, 2.B, 1.C, 3.C | | | | 1.B, 3.C | |
| contact resistance (incl. wire of 100 mm) | | < 50 mΩ | | | | | |
| hysteresis | | 30 K ± 15 K | | | | | |
| dielectric strength (standard insulation) | | 2 kV | | | | | |
| shock- / vibration testing (similar to EN 50155) | | 400 m/s ² sine half wave / 100 m/s ² 5 Hz ... 2.000 Hz sine | | | | | |
| resistances to impregnation | | tight against ordinary resins and lacquers | | | | | |
| degrees of protection provided by enclosures (EN 60529) | | IP00 | | | | | |
| suitable for use in protection category | | I, II | | | | | |
| approvals | VDE / ENEC |   | | EN 60730-1 / -2-2 / -2-3 ¹⁾ / -2-9 | | | |
| | UL |  | | UL 2111 / UL 873 ²⁾ | | | |
| | CSA |  | | C22.2 No. 77 / C22.2 No. 24 ²⁾ | | | |

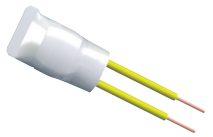
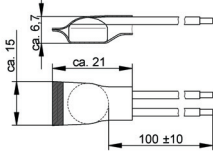
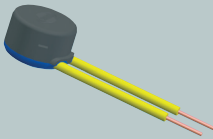
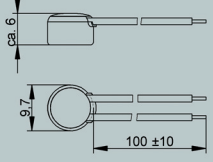
¹⁾ different power rating

²⁾ on demand

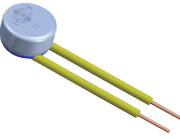
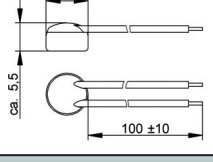
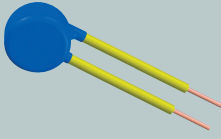
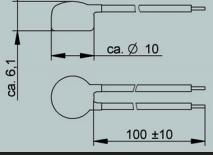
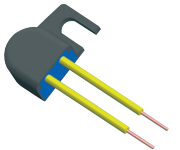
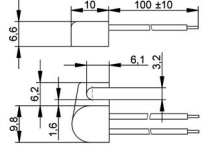
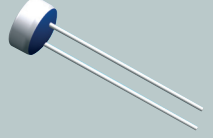
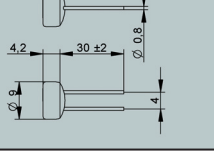
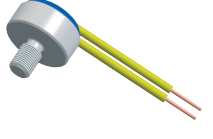
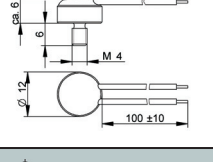
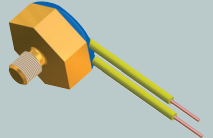
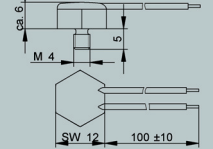
Standard wire (length 100 ± 10 mm, stripped 6 ± 1 mm)

| lead | code | temperature max. | operating voltage max. | diameter insulation | cross section diameter | UL style |
|----------------|------|------------------|------------------------|---------------------|------------------------------|----------|
| stranded white | L310 | 150 °C | 300 V | 1.80 mm | AWG20 / 0.48 mm ² | 3398 |
| | L320 | | | 2.15 mm | AWG18 / 0.96 mm ² | |
| | L340 | 200 °C | 600 V | 1.26 mm | AWG20 / 0.62 mm ² | 3557 |
| | L350 | | | 1.50 mm | AWG18 / 0.96 mm ² | |
| solid yellow | L410 | 150 °C | 300 V | 1.65 mm | AWG20 / 0.81 mm | 3398 |
| | L440 | 200 °C | 300 V | 1.71 mm | AWG20 / 0.81 mm | 1332 |

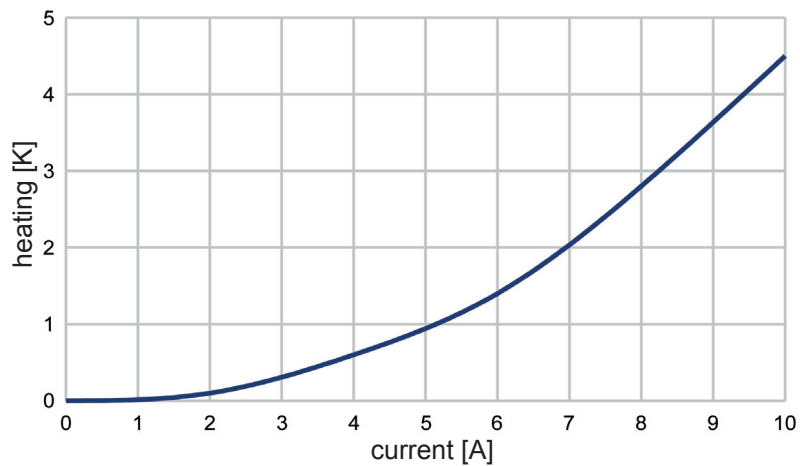
Standard insulation

| control type | nc | no | code | illustration | drawing dimensions (mm) | technical specification | approvals |
|--------------|----|----|------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|---------------------------------------------------|-----------|
| B12 | A | B | U253 |  |  | shrink cap potted Attention: Ta max. 155 °C | VDE, UL |
| B12 | A | B | U186 |  |  | cap of PPS potted | VDE, UL |

Specific variations

| control type | nc | no | code | illustration | drawing dimensions (mm) | technical specification | approvals |
|--------------|----|----|------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------|--------------|
| B12 | A | B | |  |  | not insulated potted | VDE, UL, CSA |
| B12 | A | B | U112 |  |  | coated | VDE, UL |
| B12 | A | B | U294 |  |  | housing of PPS potted | VDE, UL |
| B12 | A | B | A800 |  |  | not insulated potted | VDE, UL |
| B12 | E | G | G402 |  |  | aluminium housing thread M4x6 potted Attention: Ta max. 150 °C | VDE, UL |
| B12 | E | G | G714 |  |  | brass housing thread M4x5 potted Attention: Ta max. 150 °C | VDE, UL |

Heating by current



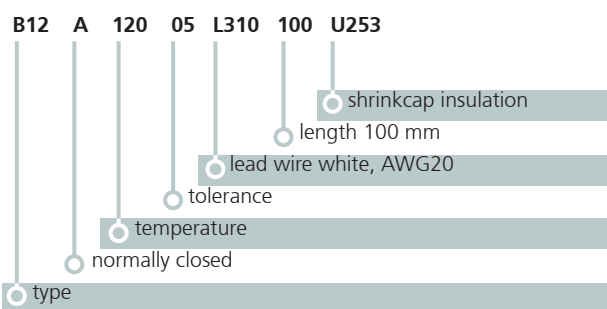
The diagram is measured with a thermal control without any insulation in an oil bath.

Attention:

The heating depends on the thermal conduction of the control to the equipment or part which should be protected.

Ordering and marking example

Ordering example



Deviations from standard controls on request.

Marking

- B12A** type (B12 nc)
- 12005** response temperature (120°C), tolerance ($\pm 5K$)
- 026D** date of manufacture (Feb.2006), country (D=Germany)

Representation office:

CANTHERM

8415 Mountain Sights Avenue • Montreal (Quebec), H4P 2B8, Canada

Tel: (514) 739-3274 • 1-800-561-7207 • Fax: (514) 739-290

E-mail : sales@cantherm.com • Website: www.cantherm.com