



Thermistor overload relay for machine protection, multi-function, 24-240V50/60HZ/DC

Part no. EMT6-DBK
Catalog No. 066168
Alternate Catalog No. EMT6-DBK
EL-Nummer (Norway) 0004131788

Delivery program

| | | | | |
|----------------------------------|----------|---|--|---|
| Product range | | | | EMT6 thermistor overload relay for machine protection |
| Description | | | | Multifunction device |
| Function | | | | Selector switch with/without manual reset Trip with short-circuit in the sensor cable Zero-voltage safe For manual or remote resetting Test button Short-circuit recognition and zero-voltage safety can be deactivated Mains and fault LED display |
| Rated operational current | | | | |
| AC-15 | | | | |
| 240 V | I_e | A | | 3 |
| AC--14 | | | | |
| 300 V | I_e | A | | 3 |
| 400 V | I_e | A | | 3 |
| | | | | Value applies starting with release 001. |
| conventional thermal current | I_{th} | A | | 6 |
| Rated control voltage | U_s | V | | 24 - 240 V 50 - 400 Hz 24 - 240 V DC |

Notes



BVS 14 ATEX F003 X

II(2)G [Ex e] [Ex d] [Ex px]

II(2)D [Ex t] [Ex p]

Observe manual MN03407006Z-DE/EN.

Can be snap fitted on a top-hat rail to IEC/EN 60715.

Technical data

General

| | | | | |
|---|--|------|--|--|
| Standards | | | | IEC/EN 60947, VDE 0660, EN 55011 |
| Climatic proofing | | | | Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic, to IEC 60068-2-30 |
| Ambient temperature | | | | |
| Open | | °C | | -25 - +60 |
| Enclosed | | °C | | - 25 - 45 |
| Storage | | °C | | - 45 - 85 |
| Mounting position | | | | As required |
| Weight | | kg | | 0.15 |
| Mechanical shock resistance half-sinusoidal shock 10 ms to IEC 60068-2-27 | | g | | 10 |
| Degree of Protection | | | | IP20 |
| Protection against direct contact when actuated from front (EN 50274) | | | | Finger and back-of-hand proof |
| Safe isolation to EN 61140 | | | | |
| between the contacts | | V AC | | 250 |

| | | | |
|--|-----------|-----------------|--|
| between contacts and power supply | | V AC | 250 |
| Auxiliary and control circuits | | | |
| Rated impulse withstand voltage | U_{imp} | V AC | 4000 |
| Rated impulse withstand voltage | U_{imp} | V AC | 6000 |
| | | | Value applies starting with release 001. |
| Overvoltage category/pollution degree | | | III/3 |
| Terminal capacities Auxiliary and control circuits | | | |
| Solid | | mm ² | 1 x (0.5 - 2.5) 2 x (0.5 - 1.5) |
| Flexible with ferrule | | mm ² | 1 x (0.5 - 2.5) 2 x (0.5 - 1.5) |
| Solid or stranded | | AWG | 20 - 14 |
| Terminal screw | | | M3.5 |
| Tightening torque | | Nm | 1.2 |
| Tools | | | |
| Pozidriv screwdriver | | Size | 2 |
| Standard screwdriver | | mm | 1 x 6 |

Auxiliary power circuit

| | | | |
|--------------------------------------|-------|---|--|
| Rated insulation voltage | U_i | V | 400 |
| | | | Value applies starting with release 001. |
| Rated operational current | I_e | A | |
| AC--14 | | | |
| Make contact | | | |
| 300 V | I_e | A | 3 |
| 380 V 400 V 415 V | I_e | A | 3 |
| | | | Value applies starting with release 001. |
| Break contact | | | |
| 300 V | I_e | A | 3 |
| 380 V 400 V 415 V | I_e | A | 3 |
| | | | Value applies starting with release 001. |
| AC-15 | | | |
| Make contact | | | |
| 220 V 230 V 240 V | I_e | A | 3 |
| 300 V | I_e | A | 1 |
| 380 V 400 V 415 V | I_e | A | 1 |
| | | | Value applies starting with release 001. |
| Break contact | | | |
| 220 V 230 V 240 V | I_e | A | 3 |
| 300 V | I_e | A | 1 |
| 380 V 400 V 415 V | I_e | A | 1 |
| | | | Value applies starting with release 001. |
| Max. short-circuit protective device | | | |
| Fuse | gG/gL | A | 6 |

Control circuit

| | | | |
|-----------------------------|-------|----------|---|
| Rated insulation voltage | U_i | V | 240 |
| Rated operational voltage | U_e | V | 240 |
| Pick-up and drop-out values | | x U_e | 0.85 - 1.1 |
| Power consumption | | | |
| AC | | VA | 3.5 |
| DC | | W | 2 |
| Trip at approx. | | Ω | 3600 |
| Recovery at approx. | | Ω | 1600 |
| Sensor circuit | | | |
| | | | Sensor circuit parameters at U_S and +20 °C: max. Cable length to sensor 250m (not insulated) Total cold resistance $\sum R_K \leq 1500 \Omega$ - R_{T1-T2} (T1, T2 shorted): $I_{T1-T2} = 1.9 \text{ mA}$ - R_{T1-T2} (4 k Ω): $U_{T1-T2} = \text{max. } 3 \text{ V DC}$, $I_{T1-T2} = \text{max. } 0.8 \text{ mA}$ |

Electromagnetic compatibility (EMC)

| | | | |
|---|--|-----|--|
| Electrostatic discharge (ESD) | | | |
| applied standard | | | IEC/EN 61000-4-2 |
| Air discharge | | kV | 8 |
| Contact discharge | | kV | 6 |
| Electromagnetic fields (RFI) | | | |
| applied standard | | | IEC/EN 61000-4-3 |
| | | V/m | 80 - 1000 MHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1 |
| Radio interference suppression | | | EN 55011 Class B |
| Burst | | kV | Supply cables: 2 Signal cables: 1 according to IEC/EN 61000-4-4 |
| power pulses (Surge) | | | 2 kV (symmetrical) 4 kV (asymmetrical) according to IEC/EN 61000-4-5 |
| Immunity to line-conducted interference to (IEC/EN 61000-4-6) | | V | 10 |

Design verification as per IEC/EN 61439

| | | | |
|--|-------------------|----|-----|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I _n | A | 0 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P _{vs} | W | 0.8 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 60 |

Technical data ETIM 7.0

Relays (EG000019) / Temperature monitoring relay (EC001446)

Electric engineering, automation, process control engineering / Low-voltage switch technology / Monitoring equipment (low-voltage switch technology) / Temperature monitoring equipment (ec@ss10.0.1-27-37-18-10 [AKF104014])

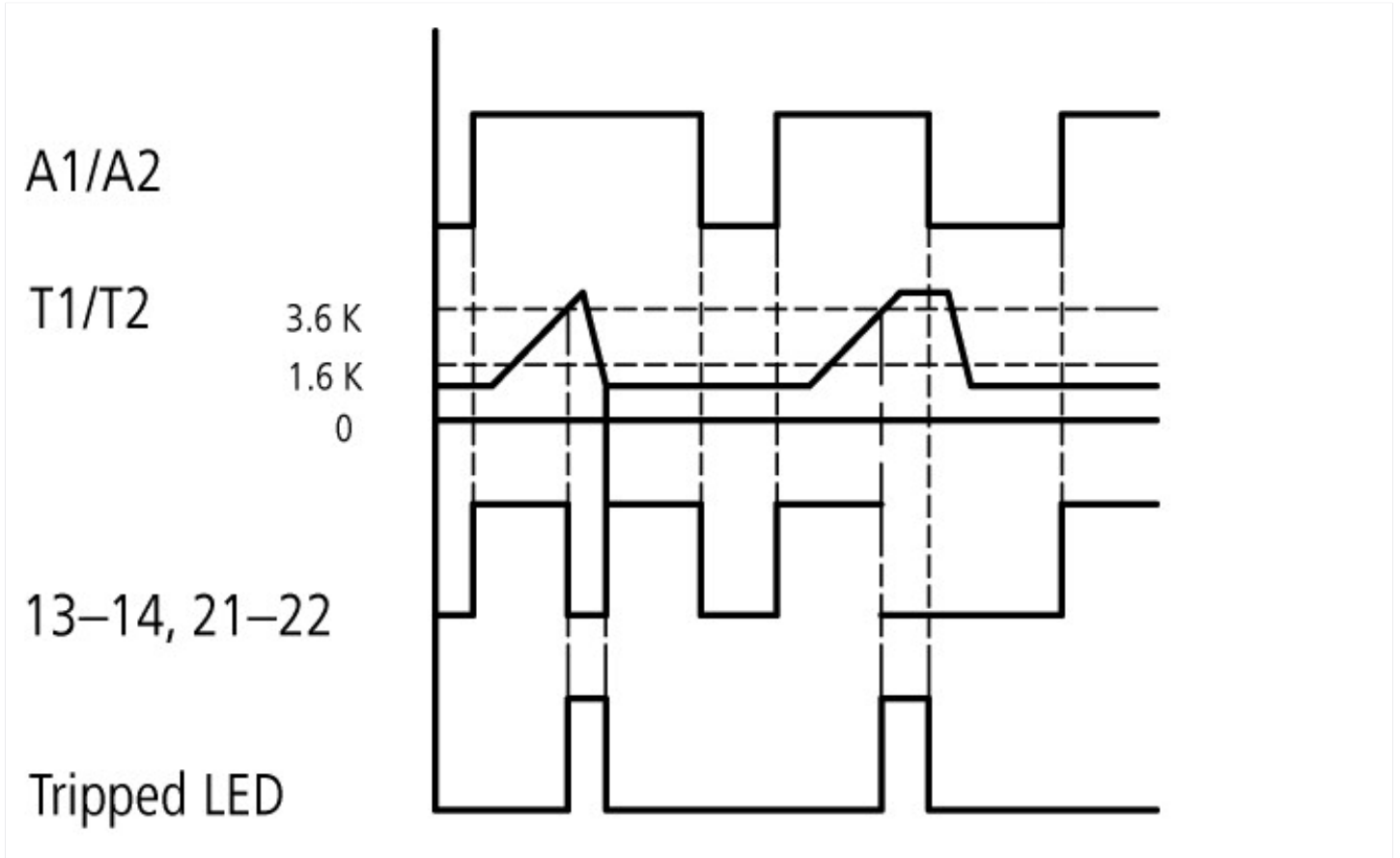
| | | | |
|--|--|-----|------------------|
| Type of electric connection | | | Screw connection |
| Rated control supply voltage U _s at AC 50HZ | | V | 24 - 240 |
| Rated control supply voltage U _s at AC 60HZ | | V | 24 - 240 |
| Rated control supply voltage U _s at DC | | V | 24 - 240 |
| Voltage type for actuating | | | AC/DC |
| With detachable clamps | | | No |
| Number of measuring circuits | | | 1 |
| Error registration possible | | | Yes |
| External reset possible | | | Yes |
| Number of contacts as normally closed contact | | | 1 |
| Number of contacts as normally open contact | | | 1 |
| Number of contacts as change-over contact | | | 0 |
| Temperature measuring range | | °C | 0 - 0 |
| Resistance measuring range | | Ohm | 750 - 12000 |
| Width | | mm | 23 |
| Height | | mm | 84 |
| Depth | | mm | 104 |

Approvals

| | | | |
|-------------------------|--|--|--|
| Product Standards | | | UL 508; CSA-C22.2 No. 14; IEC/EN 60947-8; CE marking |
| UL File No. | | | E29184 |
| UL Category Control No. | | | NKCR |
| CSA File No. | | | 12528 |

| | |
|--------------------------------------|---------------------------|
| CSA Class No. | 3211-03 |
| North America Certification | UL listed, CSA certified |
| Specially designed for North America | No |
| Max. Voltage Rating | 600 V AC |
| Degree of Protection | IEC: IP20, UL/CSA Type: - |

Characteristics



A1/A2

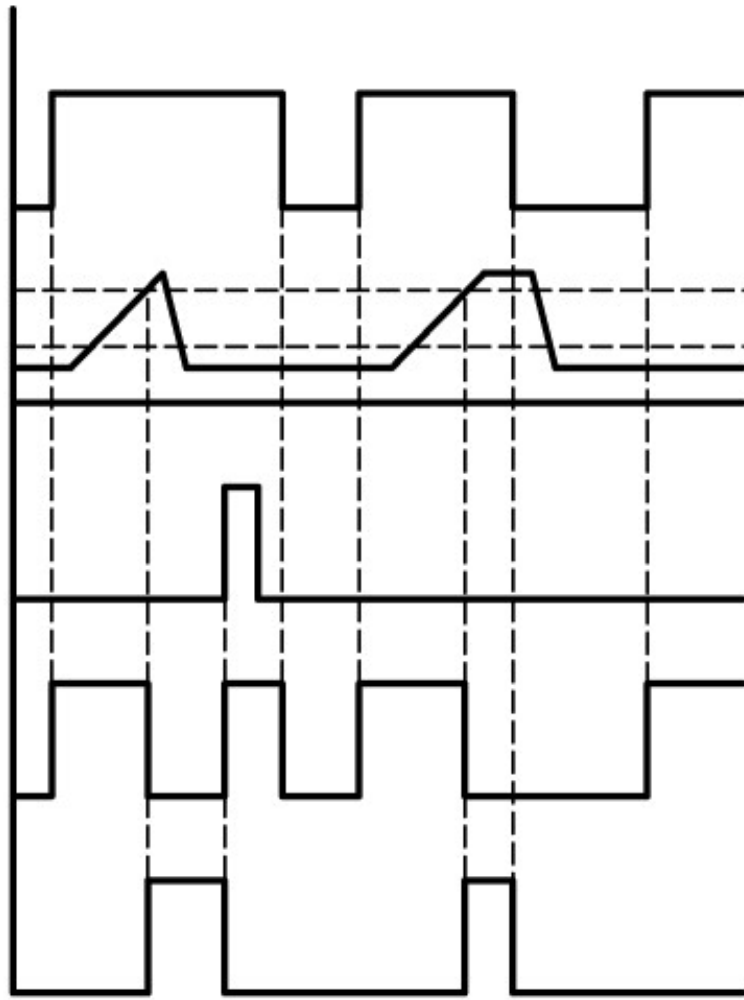
T1/T2

3.6 K
1.6 k
0

Y1/Y2, RESET

13-14, 21-22

Tripped LED



A1/A2

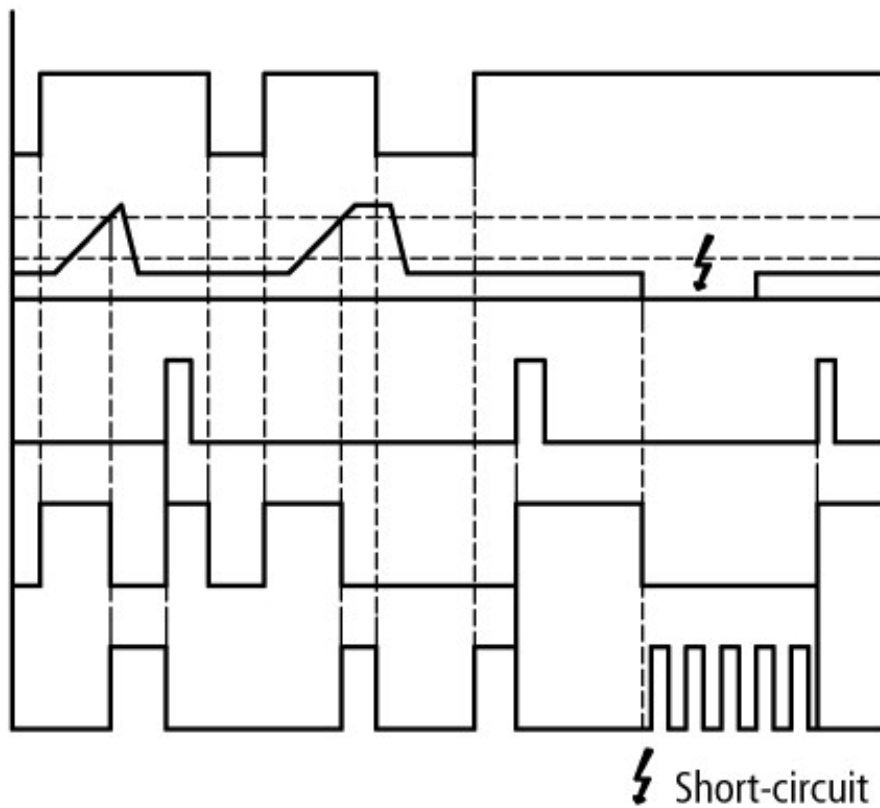
T1/T2

3.6 K
1.6 K
0

Y1/Y2, RESET

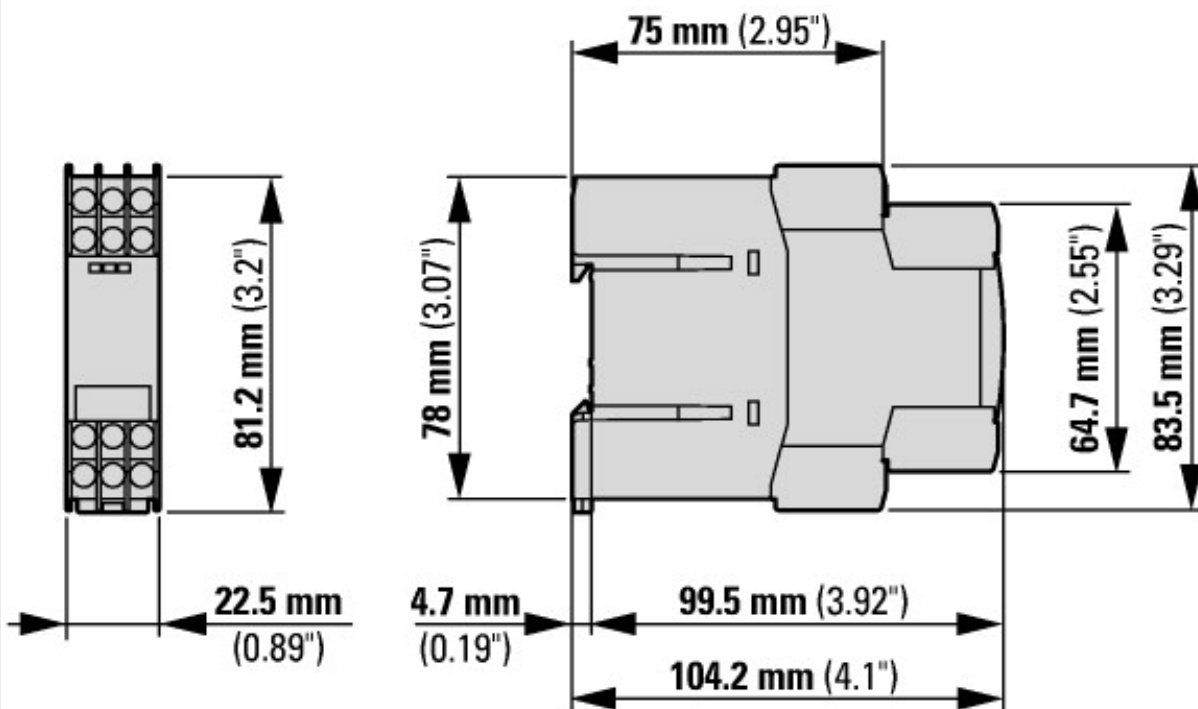
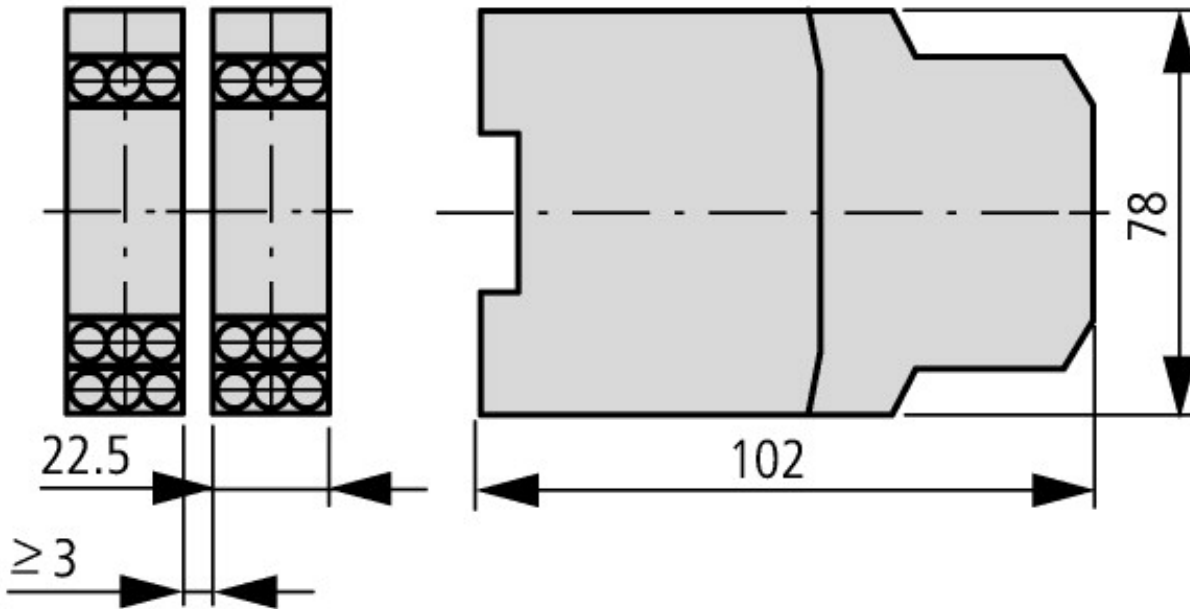
13-14, 21-22

Tripped LED



⚡ Short-circuit

Dimensions



Applies to release 001 and higher

Additional product information (links)

IL03407100Z (AWA2327-1454) thermistor overload relay for machine protection

IL03407100Z (AWA2327-1454) thermistor overload relay for machine protection

https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL03407100Z2018_05.pdf

MN03407006Z (AWB2327-1446) EMT6 machine protection relays - overload monitoring for machines in Ex e areas

MN03407006Z (AWB2327-1446) EMT6 machine protection relays - overload monitoring for machines in Ex e areas - Deutsch / English

https://es-assets.eaton.com/DOCUMENTATION/AWB_MANUALS/MN03407006Z_DE_EN.pdf

terminal markings and sensor circuit

<http://de.ecat.moeller.net/flip-cat/?edition=HPLTEv1&startpage=6.21>