



**Thermistor overload relay for machine protection, 1W , 24-240V50/60Hz, 24-240VDC, without reclosing lockout**



**Part no.** EMT6  
**Catalog No.** 066166  
**Alternate Catalog No.** EMT6  
**EL-Nummer (Norway)** 0004110419

## Delivery program

|                                                       |          |   |                                                                    |
|-------------------------------------------------------|----------|---|--------------------------------------------------------------------|
| Product range                                         |          |   | EMT6 thermistor overload relay for machine protection              |
| Function                                              |          |   | Without manual reset<br>Mains and fault LED display<br>Test button |
| <b>Rated operational current</b>                      |          |   |                                                                    |
| 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<br>24 - 240 V DC                            |
| <b>Notes</b>                                          |          |   |                                                                    |
| 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 <sup>2</sup> | 1 x (0.5 - 2.5)<br>2 x (0.5 - 1.5)       |
| Flexible with ferrule                              |           | mm <sup>2</sup> | 1 x (0.5 - 2.5)<br>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 <sub>i</sub> | V | 300                                      |
| Rated insulation voltage             | U <sub>i</sub> | V | 400                                      |
|                                      |                |   | Value applies starting with release 001. |
| Rated operational current            | I <sub>e</sub> | A |                                          |
| AC--14                               |                |   |                                          |
| Make contact                         |                |   |                                          |
| 300 V                                | I <sub>e</sub> | A | 3                                        |
| 380 V 400 V 415 V                    | I <sub>e</sub> | A | 3                                        |
|                                      |                |   | Value applies starting with release 001. |
| Break contact                        |                |   |                                          |
| 300 V                                | I <sub>e</sub> | A | 3                                        |
| 380 V 400 V 415 V                    | I <sub>e</sub> | A | 3                                        |
|                                      |                |   | Value applies starting with release 001. |
| AC-15                                |                |   |                                          |
| Make contact                         |                |   |                                          |
| 220 V 230 V 240 V                    | I <sub>e</sub> | A | 3                                        |
| 300 V                                | I <sub>e</sub> | A | 1                                        |
| 380 V 400 V 415 V                    | I <sub>e</sub> | A | 1                                        |
|                                      |                |   | Value applies starting with release 001. |
| Break contact                        |                |   |                                          |
| 220 V 230 V 240 V                    | I <sub>e</sub> | A | 3                                        |
| 300 V                                | I <sub>e</sub> | A | 1                                        |
| 380 V 400 V 415 V                    | I <sub>e</sub> | A | 1                                        |
|                                      |                |   | Value applies starting with release 001. |
| Max. short-circuit protective device |                |   |                                          |
| Fuse                                 | gG/gL          | A | 6                                        |

### Control circuit

|                             |                |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------|----------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rated insulation voltage    | U <sub>i</sub> | V                | 240                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Rated operational voltage   | U <sub>e</sub> | V                | 240                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Pick-up and drop-out values |                | x U <sub>e</sub> | 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              |                |                  | <p>Sensor circuit parameters at U<sub>S</sub> and +20 °C:</p> <p>max. Cable length to sensor 250m (not insulated)</p> <p>Total cold resistance <math>\sum R_K \leq 1500 \Omega</math></p> <p>- R<sub>T1-T2</sub> (T1, T2 shorted): I<sub>T1-T2</sub> = 1.9 mA</p> <p>- R<sub>T1-T2</sub> (4 kΩ): U<sub>T1-T2</sub> = max. 3 V DC, I<sub>T1-T2</sub> = max. 0.8 mA</p> <p>- R<sub>T1-T2</sub> (T1, T2 open): U<sub>T1-T2</sub> = 5.1 V DC typ. (5.5 V DC max.)</p> |

### 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 | <p>80 - 1000 MHz: 10</p> <p>1.4 - 2 GHz: 3</p> <p>2.0 - 2.7 GHz: 1</p> |
| Radio interference suppression |  |     | EN 55011<br>Class B                                                    |

|                                                               |  |    |                                                                            |
|---------------------------------------------------------------|--|----|----------------------------------------------------------------------------|
| Burst                                                         |  | kV | Supply cables: 2<br>Signal cables: 1<br>according to IEC/EN 61000-4-4      |
| power pulses (Surge)                                          |  |    | 2 kV (symmetrical)<br>4 kV (asymmetrical)<br>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 <sub>n</sub>    | A  | 0   |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub>  | W  | 0   |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub>  | W  | 0   |
| Static heat dissipation, non-current-dependent           | P <sub>vs</sub>   | W  | 0.8 |
| Heat dissipation capacity                                | P <sub>diss</sub> | W  | 0   |
| Operating ambient temperature min.                       |                   | °C | -25 |
| Operating ambient temperature max.                       |                   | °C | 60  |

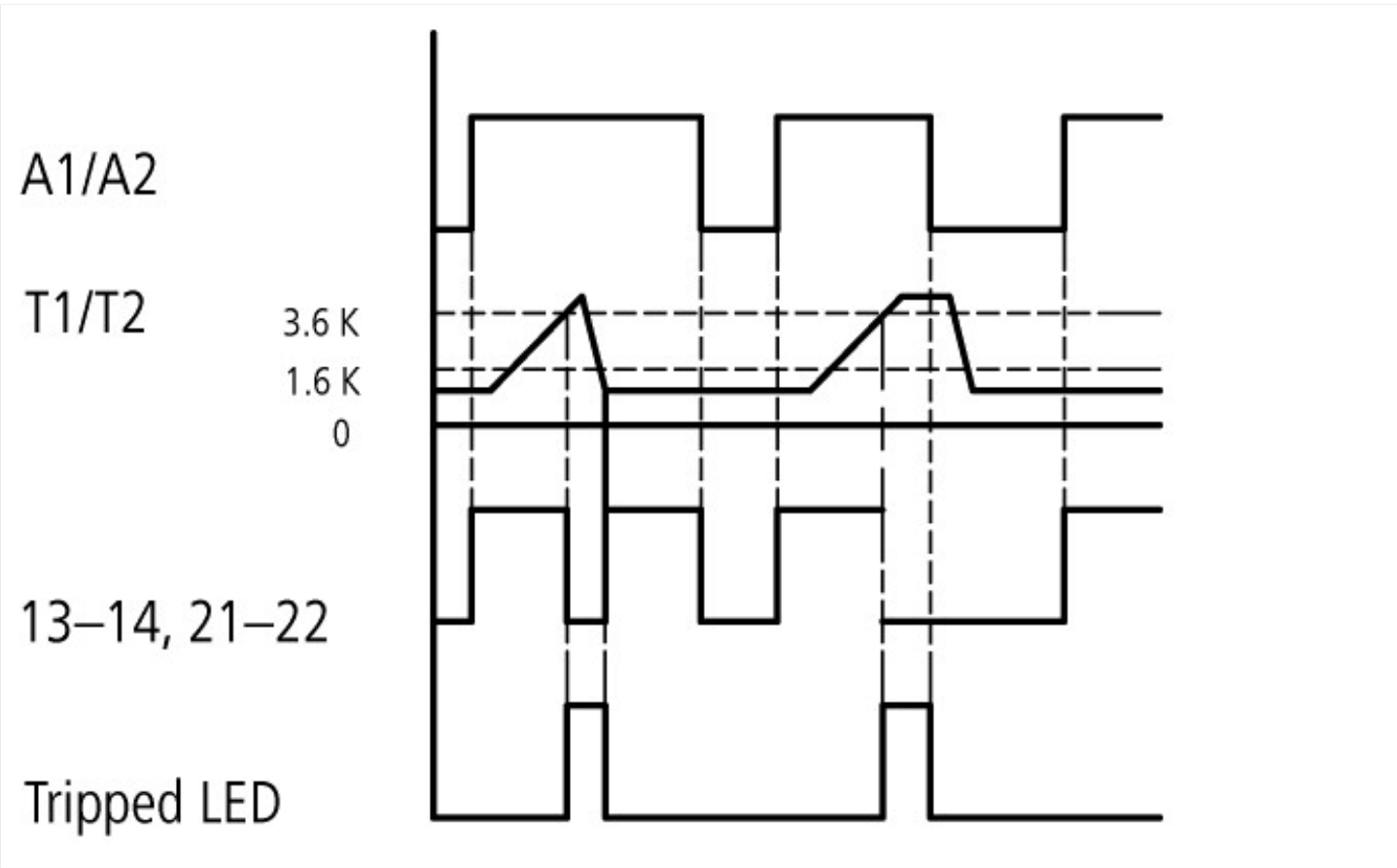
## Technical data ETIM 7.0

|                                                                                                                                                                                                                                |  |     |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|------------------|
| 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 (ecI@ss10.0.1-27-37-18-10 [AKF104014]) |  |     |                  |
| Type of electric connection                                                                                                                                                                                                    |  |     | Screw connection |
| Rated control supply voltage Us at AC 50HZ                                                                                                                                                                                     |  | V   | 24 - 240         |
| Rated control supply voltage Us at AC 60HZ                                                                                                                                                                                     |  | V   | 24 - 240         |
| Rated control supply voltage Us at DC                                                                                                                                                                                          |  | V   | 24 - 240         |
| Voltage type for actuating                                                                                                                                                                                                     |  |     | AC/DC            |
| With detachable clamps                                                                                                                                                                                                         |  |     | No               |
| Number of measuring circuits                                                                                                                                                                                                   |  |     | 1                |
| Error registration possible                                                                                                                                                                                                    |  |     | No               |
| External reset possible                                                                                                                                                                                                        |  |     | No               |
| 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              |

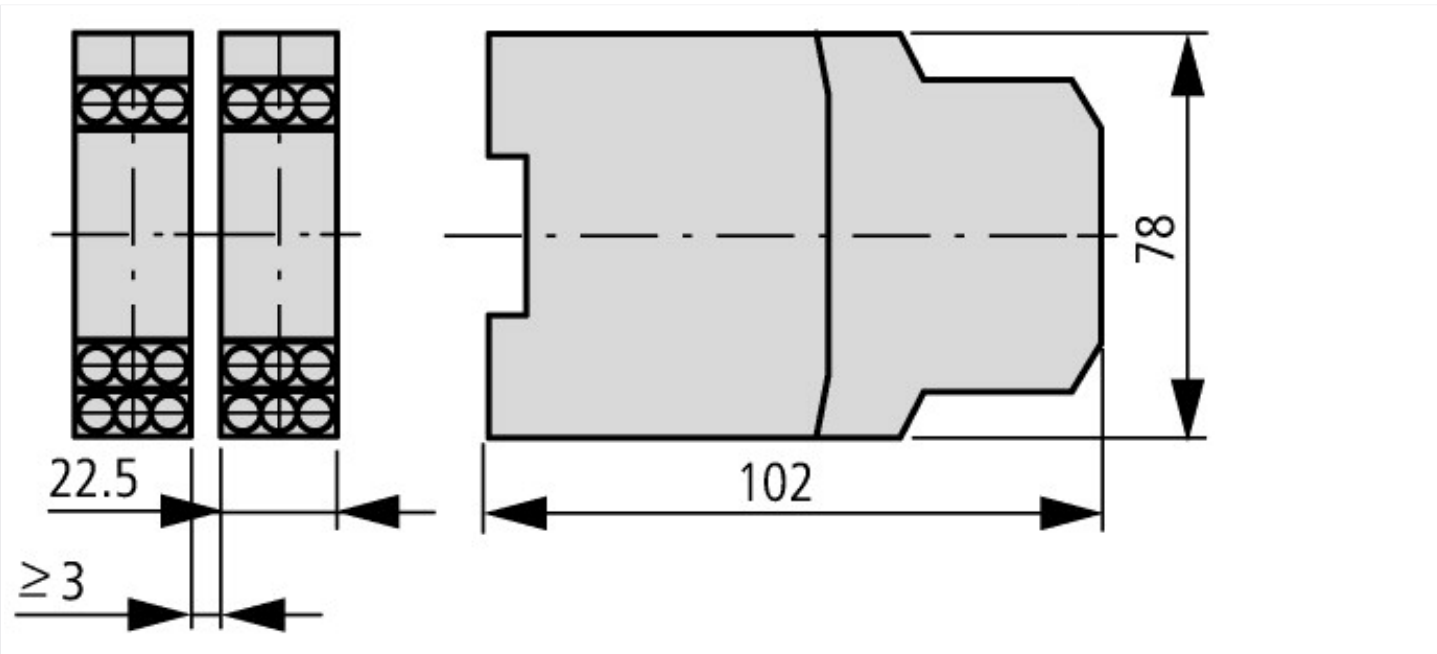
## Approvals

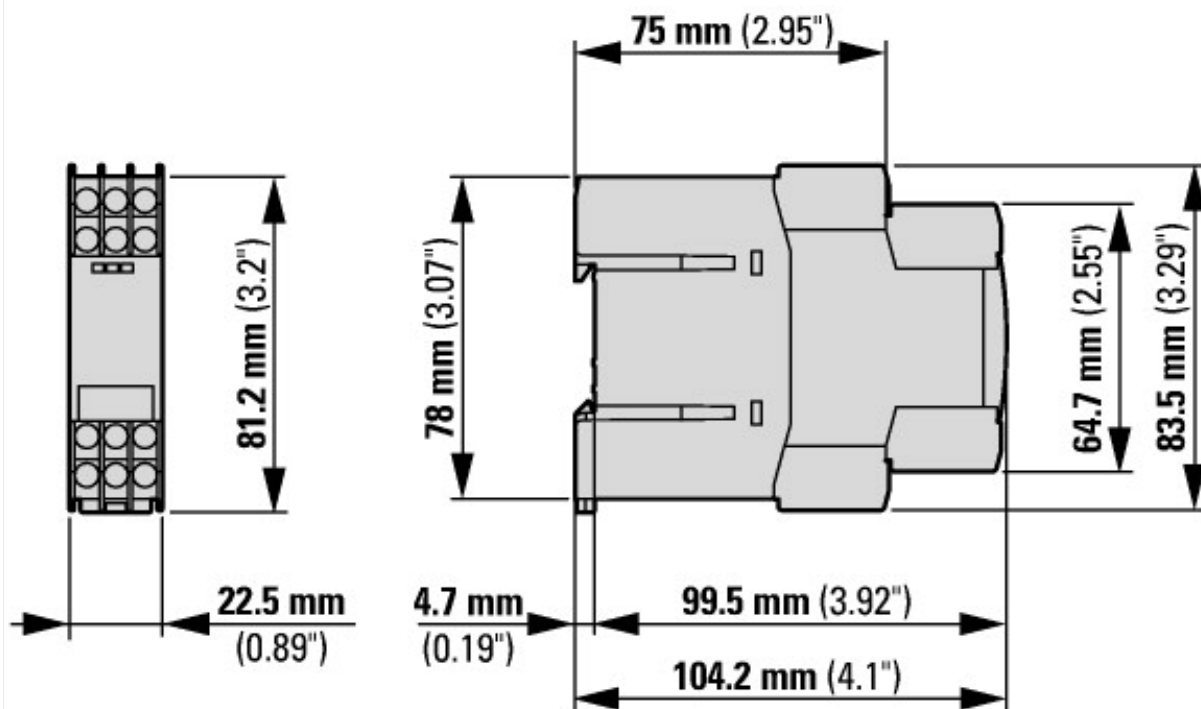
|                                      |  |  |                                                      |
|--------------------------------------|--|--|------------------------------------------------------|
| Product Standards                    |  |  | UL 508; CSA-C22.2 No. 14; IEC/EN 60947-8; CE marking |
| 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



Dimensions





Applies to release 001 and higher

## Assets (links)

### [Declaration of CE Conformity](#)

00002815

### [Instruction Leaflets](#)

IL03407100Z2018\_05

### [Manuals](#)

MN03407006Z\_DE\_EN (English)