

DIN Rail Mount 35 mm HT81 -2 Part number 84874120



- Control relay designed to monitor the temperature in lift machine rooms in accordance with standard EN81
- PT100 input
- Adjustable control between 5 °C and 40 °C
- Independent setting of high and low thresholds
- Built-in phase control option

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|-------|--|
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| Туре | Function | Nominal voltage (V) | 3-phase control |
|-------------------------|-----------------------------------|---------------------|-----------------|
| 84874120 HT81 -2 | Under/Overtemperature window mode | 24 →240 V AC/DC | No |

Specifications

Supply

| Supply voltage Un | 24 V →240 V AC/DC |
|--------------------------------|--------------------------|
| Voltage supply tolerance | -15 %, + 10 % AC |
| | -10 %, +10 % DC |
| Operating range | 20,4 V →264 V AC |
| | 21,6 V →264 V DC |
| Polarity with DC voltage | No |
| AC supply voltage frequency | 50 / 60 Hz ±10 % |
| Power consumption at Un | 3.5 VA in AC/0.6 W in DC |
| Immunity from micro power cuts | 10 ms |

Inputs and measuring circuit

| Low temperature measurement selection | -1 °C, 1 °C, 3 °C, 5 °C, 7 °C, 9 °C, 11 °C |
|--|---|
| High temperature measurement selection | 34 °C, 36 °C, 38 °C, 40 °C, 42 °C, 44 °C, 46 °C |
| Temperature measurement input resistance | 1330 Ω |
| Fixed hysteresis | 2 ℃ |
| Display precision | ±2% |
| Max. length of Pt100 probe cables | 10 m |

Timing

| Delay on thresold crossing | 1 →10 s |
|---|-------------------------------|
| Display precision | 0, + 10 % |
| Reset time | 8 s |
| Delay on pick-up | 200 ms |
| Maximum response time on disappearance of fault | 3.5 s for a temperature fault |
| | 500 ms for a phase fault |

Output

| Output | |
|---|---|
| Type of contacts | No cadmium |
| Maximum breaking voltage | 250 V AC/DC |
| Max. breaking current | 5 A AC/DC |
| Min. breaking current | 10 mA / 5 V DC |
| Electrical life (number of operations) | 1 x 10 ⁴ |
| Breaking capacity (resistive) | 1250 VA AC |
| Maximum rate | 360 operations/hour at full load |
| Operating categories acc. to IEC/EN 60947-5-1 | AC 12, AC 13, AC 14, AC 15, DC 12, DC 13, DC 14 |
| Mechanical life (operations) | 30 x 10 ⁶ |

Insulation

| Insulation coordination (IEC/EN 60664-1) | Overvoltage category III: degree of pollution 3 |
|--|---|
| Rated impulse withstand voltage (IEC/EN 60664-1) | 4 kV (1,2 / 50 μs) |
| Dielectric strength (IEC/EN 60664-1) | 2 kV AC 50 Hz 1 min. |
| Insulation resistance (IEC/EN 60664-1) | > 100 MΩ - 500 V DC |

General characteristics

| General Characteristics | |
|-------------------------|---|
| Display power supply | Green LED |
| Temperature indication | Yellow LED (HWT81) |
| "Phase" indication | Yellow LED (HWT81) |
| High threshold relay | Yellow LED (HT81, HT81-2) |
| Low threshold relay | Yellow LED (HT81, HT81-2) |
| Casing | 35 mm |
| Mounting | On 35 mm symmetrical DIN rail, IEC/EN 60715 |

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| Mounting position | All positions |
|---|---|
| Material : enclosure plastic type VO to UL94 standard | Incandescent wire test according to IEC 60695-2-11 & NF EN 60695-2-11 |
| Protection (IEC/EN 60529) | Terminal block : IP 20 IP 30 casing |
| Weight | 121 g |
| Connecting capacity IEC/EN 60947-1 | Rigid : 1 x 4 ² - 2 x 2.5 ² mm ² 1 x 11 AWG - 2 x 14 AWG |
| | Flexible with ferrules : 1 x 2.5 ² - 2 x 1.5 ² mm ² 1 x 14 AWG - 2 x 16 AWG |
| Max. tightening torques IEC/EN 60947-1 | 0,6 →1 Nm / 5,3 →8,8 Lbf.ln |
| Operating temperature IEC/EN 60068-2 | -20 →+50 °C |
| Storage temperature IEC/EN 60068-2 | -40 →+70 °C |
| Humidity IEC/EN 60068-2-30 | 2 x 24 hr cycle 95 % RH max. without condensation 55 °C |
| Vibrations according to IEC/EN60068-2-6 | 10 →150 Hz, A = 0.035 mm |
| Shocks IEC/EN 60068-2-6 | 5 g |

Standards

| Marking Product standard | CE (LVD) 73/23/EEC - EMC 89/336/EEC NF EN 60255-6 / IEC 60255-6 / UL 508 / CSA C22.2 N°14 / EN 81-1 |
|--|--|
| Electromagnetic compatibility (EMC) | Immunity EN 61000-6-2/IEC 61000-6-2 Emission EN 61000-6-4/EN 61000-6-3 IEC 61000-6-4/IEC 61000-6-3 Emission EN 55022 class B |
| Certifications | UL, CSA, GL |
| Conformity with environmental directives | RoHS, WEEE |

Inputs and measuring circuit

| inputs and ineasuring circuit | |
|---|---|
| Phase control voltage range | - |
| Phase failure detection with regeneration | - |
| Frequency of measured signal | - |
| Relay drop-out voltage (phase failure) | - |
| 3-phase input resistors | - |
| | |

Timing

Maximum response time in the event of a 3-phase fault (ms)

Output

| Type of output | 2 single pole NO relay | |
|----------------|------------------------|--|
| | | |
| | | |

Insulation

| Galvanic isolation of power supply/measurement | Yes, between power supply and PT100 (transformer) |
|--|--|
| | Yes, between power supply and output (transformer and relay) |
| | Yes, between PT100 and output (relay) |
| Nominal insulation voltage | 250 V |

Comments

Accessories

| Description | Code |
|---|----------|
| Removable sealable cover for 35 mm casing | 84800001 |

Principles

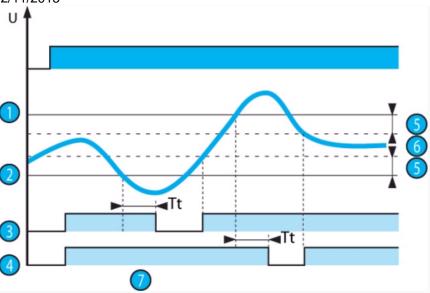


Overview

Temperature control relays for lift machine rooms are designed for monitoring the temperature between 5 °C and 40 °C according to standard EN81.

Principles

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HT81-2 operating principle :

As long as the temperature controlled by the PT100 stays between the two preset thresholds on the front face, the output relays are closed and their yellow LEDs are lit.

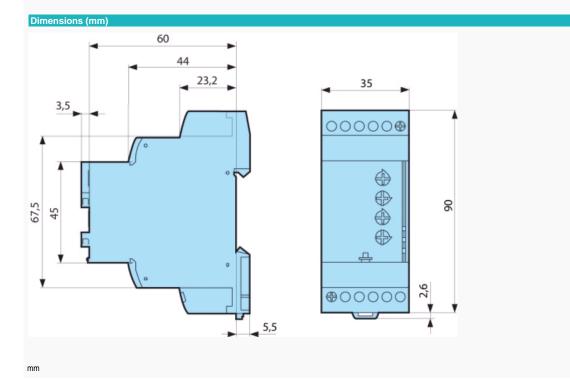
When the temperature exceeds one of the preset thresholds on the front face (upper or lower threshold), the preset time delay on the front face (Tt) is activated. The yellow LED corresponding to the threshold exceeded (upper or lower) flashes.

At the end of the time delay, if the temperature is still beyond one of the preset thresholds, the corresponding output relay opens and the yellow LED corresponding to the threshold exceeded is extinguished.

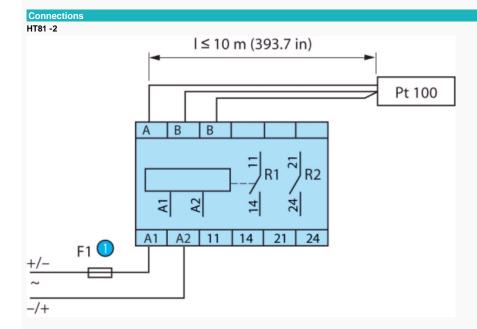
The output relay closes instantaneously (at about the response time for disappearance of a fault) when the temperature returns within the window of the two preset thresholds on the front face plus (or minus) the fixed hysteresis.

If the PT100 probe is wired incorrectly (missing or short-circuited) the output relays open and all 3 LEDs flash.

| Nº | Legend |
|----|--|
| 0 | High threshold |
| 2 | Low threshold |
| 3 | Low threshold relay R1 |
| 4 | High threshold relay R2 |
| 6 | Hysteresis |
| 6 | Monitored temperature |
| 0 | Threshold crossing delay adjustable on front face (Tt) |



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| ı | 10 | Legend |
|---|----------|---|
| (| D | Fusible ultra rapide 1 A ou coupe circuit |

Connections

CA 84874120





- Customisable colours and labels
- Fixed threshold in the generic measurement range
 Fixed or adjustable time delay
- Adjustable fixed hysteresis