

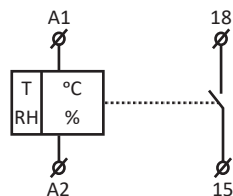
Thermtec-HT8F

Temperature and Humidity Monitoring Relay



The Thermtec-HT8F is designed to monitor temperature and humidity via a built-in sensor. The relay offers eight switching functions and is usable for various types of load (e.g. fans, heating, air-conditioning, dehumidifying units etc.).

- Temperature monitoring in range 0 - 60°C
- Humidity monitoring in range 50 - 90%
- 8 selectable functions
- Self detection of faulty sensor
- Fixed setting of temperature hysteresis at 2.5°C and humidity at 4%
- Output state is indicated visually via a Red LED
- Supply voltage 24Vac/dc - 240Vac/dc
- Output contact 1 x NO / SPDT 16A / 250V AC1
- 1-module, DIN-Rail mounting



Order Code

Thermtec-HT8F

Thermtec-HT8F Technical Specification

Function	Temperature and Humidity Monitoring
Supply Terminals	A1 - A2
Voltage Range	24Vac/dc - 240Vac/dc (AC 50 - 60Hz)
Power Input	1VA / 0.5W max.
Max. Dissipated Power (Un + Terminals)	2.5W
Supply Voltage Tolerance	-15%, +10%
Temperature Range	0 - 60°C
Humidity Range	50 - 90%
Temperature Hysteresis	2.5°C
Time Humidity Hysteresis	4%
Sensor	Internal
Indication of Sensor Fault	Flashing Red LED
Setting Accuracy (Mechanical)	5%
Long Term Stability of Humidity	Typical < 0.8% / year
Changeover Contacts	1 x NO / SPDT (AgSnO ₂)
Rated Current	16 A / AC1, 10 A / 24Vdc
Breaking Capacity	4000VA / AC1, 300W / DC
Output Indication	Red LED Illuminates
Switching Voltage	250Vac / 24Vdc
Mechanical Life	15,000,000 Cycles
Electrical Life (AC1)	35,000 Cycles

Thermtec-HT8F Technical Specification

Operating Temperature	-20°C to 60°C
Storage Temperature	-30°C to 70°C
Electrical Strength	2.5kV (Supply Output)
Operating Position	Vertical, with correct orientation
Mounting	DIN-Rail EN 60715
Protection Degree	IP40 from Front Panel / IP10 Terminals
Overvoltage Category	III
Pollution Degree	2
Max. Cable Size (mm ²)	Solid Wire max. 2x 2.5 or 1x 4 / Stranded Wire with Ferrule max. 1x 2.5 or 2x 1.5 (AWG 12)
Dimensions	90 x 17.6 x 64mm
Weight	63g
Standards	EN 60730-2-9, EN 61010-1

Thermtec-HT8F Functions

The relay has eight different switching functions. During installation you should take into account that hysteresis may be increased by the thermal and humidity lag between the sensor and the ambient environment. The relay has a built-in fault detection sensor and in case of a sensor fault exceeding allowed limits (for temperature -30°C and 80°C; for humidity 5% and 95%) or in case of faulty internal communication higher than 50% (due to e.g. high ambient disturbances), the contact opens and a sensor fault is indicated. Sensor faults do not have an influence if the functions permanently ON or permanently OFF are selected. To ensure correct installation, arrows on the product's housing need to be pointing upwards and the vent slots should not be covered.

A: T > Tset or RH > RHset

Relay switches on if temperature or humidity exceed set limits, relay opens if temperature and humidity are under set limits, e.g. fan switching, fault indication.

B: T < Tset or RH > RHset

Relay switches on if temperature is lower or humidity is higher than selected limit, relay opens if temperature is higher or humidity is lower than selected limit, e.g. switching heating unit.

C: T > Tset or RH < RHset

Relay switches on if temperature is higher or humidity is lower than the selected limit, relay opens if temperature is lower and humidity is higher than selected limit, e.g. switching of cooling unit with humidifier.

D: T < Tset or RH < RHset

Relay switches on if temperature or humidity are lower than the selected limit, relay opens if temperature and humidity are higher than the selected limit, e.g. fault indication, switching off heating unit with humidifier.

E: T < Tset and RH < RHset

Relay opens if temperature or humidity are higher than the selected limit, relay switches on if temperature and humidity drop under the selected limit, this is the inverse function to function A (NC contact).

F: T > Tset and RH < RHset

Relay opens if temperature is lower or humidity is higher than the selected limit, relay switches if temperature is higher and humidity is lower than the selected limit, inverse function to function C (NC contacts).

G: T < Tset and RH > RHset

Relay opens if temperature is higher or humidity is lower than the selected limit, relay switches if temperature is lower and humidity is higher than the selected limit, inverse function to function C (NC contact).

H: T > Tset and RH > RHset

Relay opens if temperature or humidity are lower than the selected limit, relay opens if temperature or humidity are higher than the selected limit, inverse function to function D (NC contact).

ON: Manual relay control - relay is always permanently switched on (connection test).

OFF: Manual relay control - relay is always permanently open (temporarily out of order).

Note: If none of the switching conditions above have been met, the output relay will be open.