



**finder**<sup>®</sup>  
SWITCH TO THE FUTURE

# Panel Thermo-Hygrostat and Thermostats

**7T**  
SERIES



Drying kilns



Industrial  
refrigeration



Road / tunnel  
lighting



Industrial  
furnaces and  
ovens



Automatic  
car-washes



Panels for  
electrical  
distribution



Control panels



Forced-air  
ventilators





**Panel Thermo-Hygrostat**

- Small, compact size (17.5 mm wide)
- Electronic control
- 4 functions
- Nominal voltage 110...240 V AC/DC
- Temperature ranges from +10° to +60°C
- Humidity range up to 90%
- LED status indication contact ON
- 35 mm rail (EN 60715) mount

**Panel thermostat**

- Small, compact size (17.5 mm wide)
- Snap action thermostatic Bimetal sensor
- Wide temperature setting range
- Long electrical life
- 35 mm rail (EN 60715) mount

**NEW** 7T.51



**7T.81.0.000.240x**



**7T.81.0.000.230x**



\* Measured with 0.3 K/min

\*\* Measured with 0.5 %/min

For outline drawing see page 6

**Contact specification**

| Contact configuration                       |           | 1 NO        | 1 NC        | 1 NO        |
|---|-----------|-------------|-------------|-------------|
| Rated current/Maximum peak current          | A         | 10/20       | 10/20       | 10/20       |
| Rated voltage/<br>Maximum switching voltage | V AC      | 250/250     | 250/250     | 250/250     |
| Rated load AC1                              | VA        | 2500        | 2500        | 2500        |
| Rated load AC15 (230 V AC)                  | VA        | 250         | 250         | 250         |
| Single phase motor rating AC3 (230 V AC)    | kW        | 1.1         | 1.1         | 1.1         |
| Breaking capacity DC1: 30/110/220 V         | A         | 1/0.3/0.15  | 1/0.3/0.15  | 1/0.3/0.15  |
| Minimum switching load                      | mW (V/mA) | 500 (12/10) | 500 (12/10) | 500 (12/10) |
| Standard contact material                   |           | AgNi        | AgNi        | AgNi        |

**Coil specifications**

|                 |             |           |   |   |
|-----------------|-------------|-----------|---|---|
| Nominal Voltage | V AC/DC     | 110...240 | — | — |
| Rated Power     | VA (50Hz)/W | 1.8/0.44  | — | — |
| Operating range | V AC/DC     | 88...264  | — | — |

**Temperature specifications \***

|                             |    |           |           |          |           |          |
|-----------------------------|----|-----------|-----------|----------|-----------|----------|
| Setting range (ventilation) | °C | +10...+60 | -20...+40 | +0...+60 | -20...+40 | +0...+60 |
| Switch differential         | K  | 4 ± 2     | 7 ± 4     | —        | 7 ± 4     | —        |
| Setting accuracy full range | K  | -1...+3   | —         | —        | —         | —        |

**Humidity specifications \*\***

|                          |   |         |   |   |
|--------------------------|---|---------|---|---|
| Setting range (humidity) | % | 50...90 | — | — |
| Hysteresis               | % | 4 ± 2   | — | — |
| Setting accuracy         | % | 5       | — | — |

**Technical data**

|                                   |        |   |   |                       |
|-----------------------------------|--------|---|---|-----------------------|
| Electrical life at rated load AC1 | cycles | 100 · 10 <sup>3</sup>   | 100 · 10 <sup>3</sup>   | 100 · 10 <sup>3</sup> |
| Ambient temperature range         | °C     | -25...+60   | -45...+80   | -45...+80             |
| Protection category               |        | IP 20   | IP 20   | IP 20                 |
| Approvals (according to type)     |        |    |    |                       |

## Ordering information

Example: 7T Series, Thermo-Hygrostat for temperature and humidity control, 110...240 V AC/DC, Multifunction, 35 mm rail (EN 60715) mount.

7 T . 5 1 . 0 . 2 3 0 . 4 3 6 0

**Series**

**Type**

5 = Thermo-Hygrostatic control  
8 = Temperature control

**No. of contacts**

1 = 1 contact

**Voltage type**

0 = AC/DC (only 7T.51)  
0 = No operating voltage required  
(only 7T.81)

**Rated operating voltage**

230 = 110...240 V (only 7T.51)  
000 = No operating voltage required

**Control function**

60 = Multifunction (only 7T.51)  
01 = -20...+40 °C (only 7T.81)  
03 = 0...+60 °C (only 7T.81)

**Contact configuration**

3 = 1 NO contact  
4 = 1 NC contact

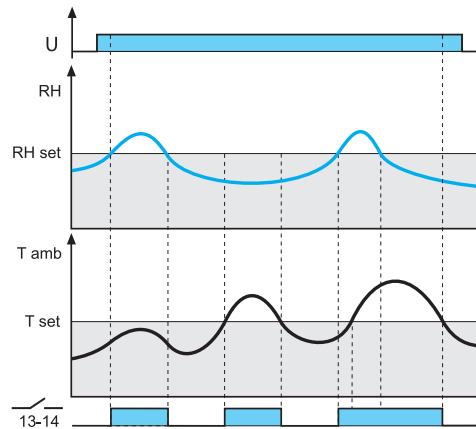
**Monitoring function**

2 = Temperature control  
4 = Temperature and Humidity, adjustable

## Technical data

| Insulation                                     |                 | 7T.51       | 7T.81          |
|--|-----------------|-------------|----------------|
| Dielectric strength between open contacts      | V AC            | 1000        | 500            |
| Dielectric strength between supply and contact | V AC            | 2000        | —              |
| Other data                                     |                 |             |                |
| Screw torque                                   | Nm              | 0.5         | 0.5            |
| Max. wire size                                 |                 | solid cable | stranded cable |
|  | mm <sup>2</sup> | 1 x 2.5     | 1 x 1.5        |
|  | AWG             | 1 x 12      | 1 x 16         |

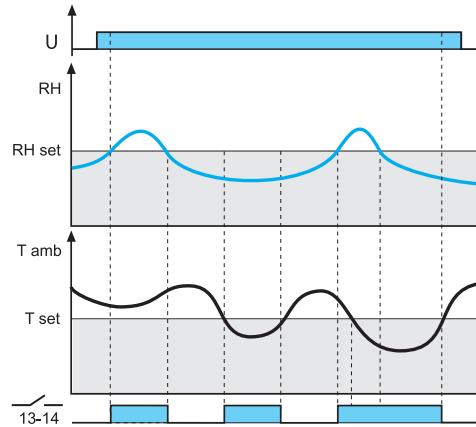
## Functions 7T.51



### HT: RH > RHset OR Tamb > Tset

Power is permanently applied to the thermo-hygrostat. The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (Tamb) is > of set temperature (Tset).

When contact is close, LED is ON

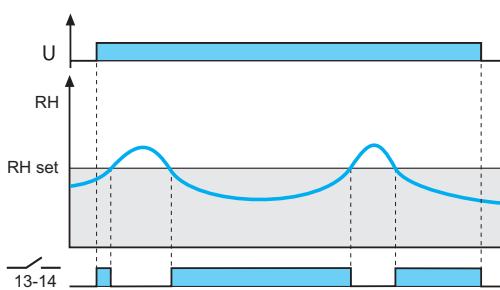


### TH: RH > RHset OR Tamb < Tset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature (Tamb) is < of set temperature (Tset).

When contact is close, LED is ON

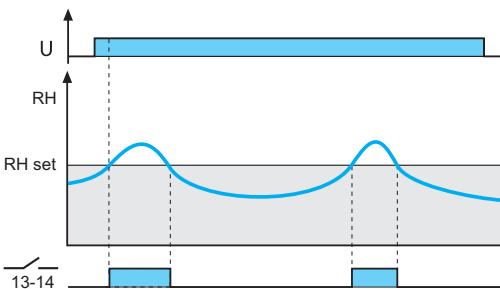
## Functions 7T.51



### HL: RH < RHset

The contact 13-14 closes if the ambient humidity (RH) is < of set humidity (RHset)

When contact is close, LED is ON

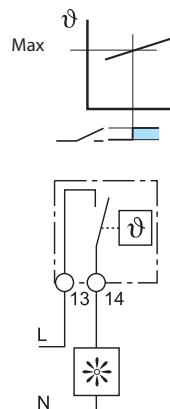
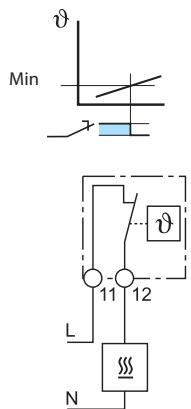


### HM: RH > RHset

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset)

When contact is close, LED is ON

## Functions 7T.81

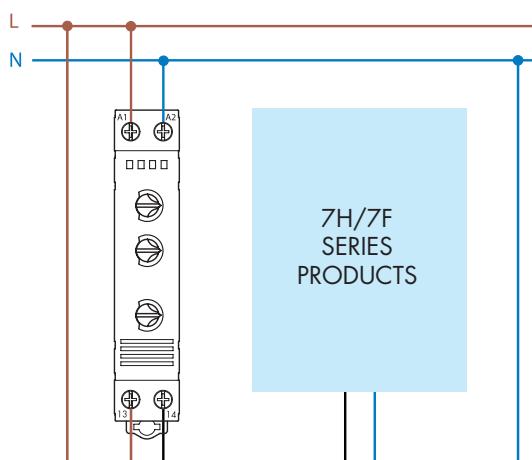


**Heating control** - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

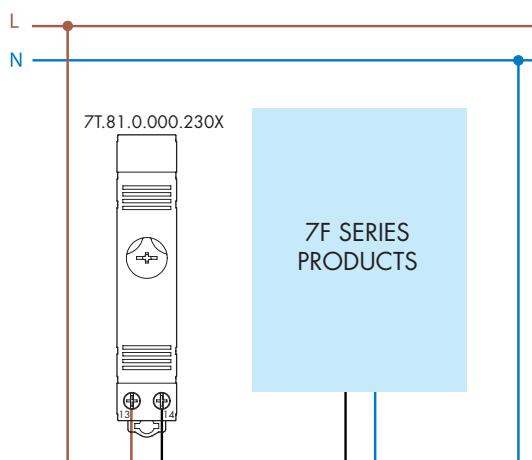
**Ventilation control** - Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this set temperature.

## Wiring diagrams

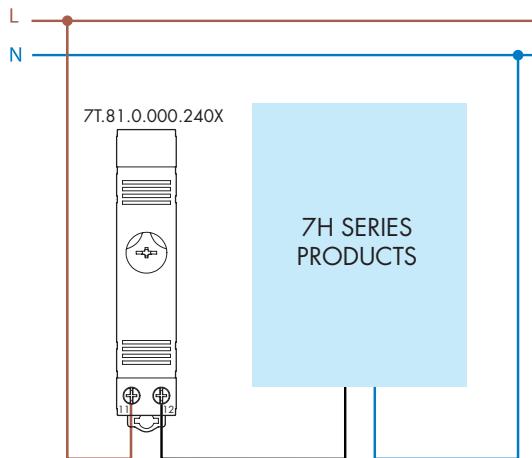
7T.51



7T.81...230x



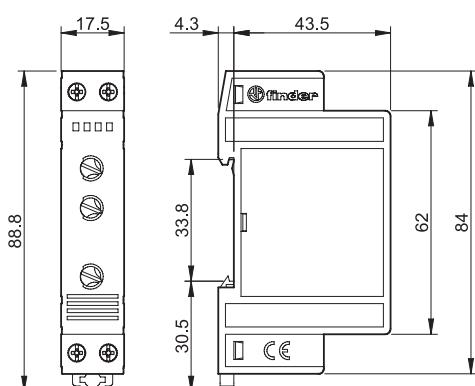
7T.81...240x

**G**

## Outline drawings

Type 7T.51

Screw terminal



Type 7T.81

Screw terminal

