

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



- Thermo-Hygrostatic control
- Nominal voltage 110...240 V AC/DC

7T.81.0.000.240x



- Heating control

7T.81.0.000.230x



- Ventilation control

* Measured with 0.3 K/min
** Measured with 0.5 %/min

For outline drawing see page 6

Contact specification

| | | | | |
|---|-----------|----------------|----------------|----------------|
| Contact configuration | | 1 NO (SPST-NO) | 1 NC (SPST-NC) | 1 NO (SPST-NO) |
| Rated current/Maximum peak current | A | 10/15 | 10/20 | 10/20 |
| Rated voltage/ Maximum switching voltage | V AC | 250/400 | 250/250 | 250/250 |
| Rated load AC1 | VA | 2500 | 2500 | 2500 |
| Rated load AC15 (230 V AC) | VA | 500 | 250 | 250 |
| Single phase motor rating AC3 (230 V AC) | kW | — | 1.1 | 1.1 |
| Breaking capacity DC1: 24/110/220 V | A | 10/0.3/0.12 | 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 | -20...+60 | 0...+60 | -20...+40 | -20...+60 | 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 ³ | 100 · 10 ³ | | | 100 · 10 ³ | | |
| 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)
02 = -20...+60 °C (only 7T.81)
03 = 0...+60 °C (only 7T.81)

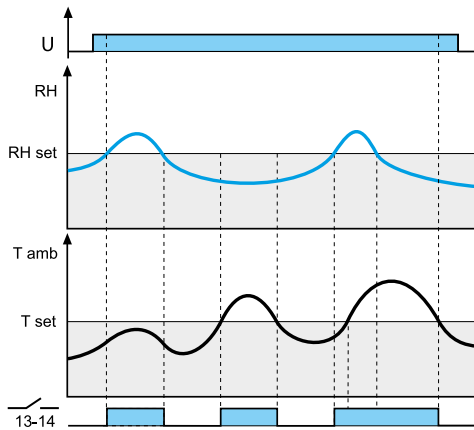
Contact configuration
3 = 1 NO contact
4 = 1 NC contact

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 ² | 1 x 2.5 | 1 x 1.5 |
| | AWG | 1 x 12 | 1 x 16 |

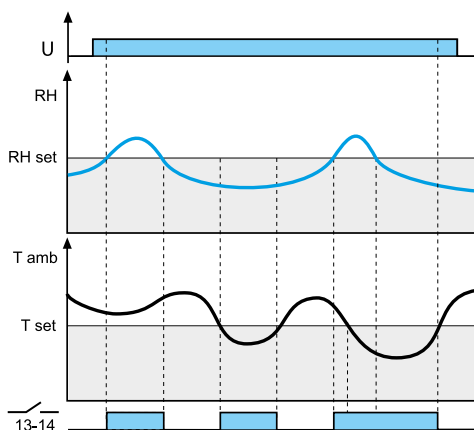
Functions 7T.51



HT: $RH > RH_{set}$ OR $T_{amb} > T_{set}$

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

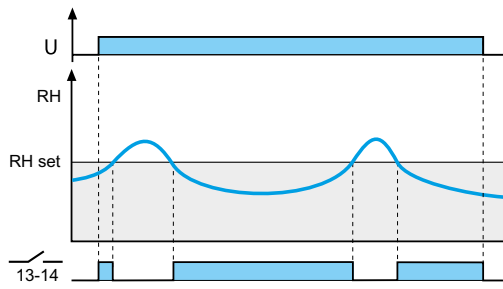


TH: $RH > RH_{set}$ OR $T_{amb} < T_{set}$

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

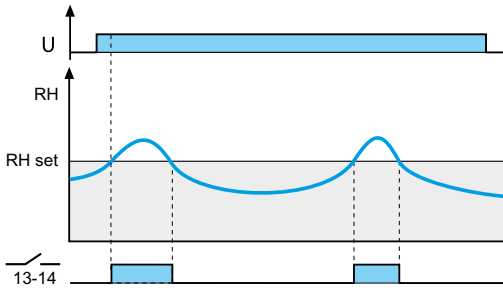
Functions 7T.51



HL: $RH < RH_{set}$

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

When contact is close, LED is ON

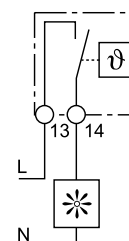
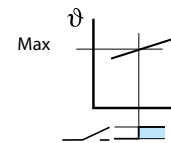
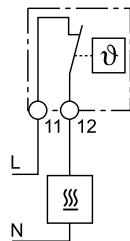
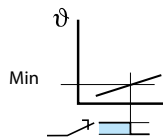


HM: $RH > RH_{set}$

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



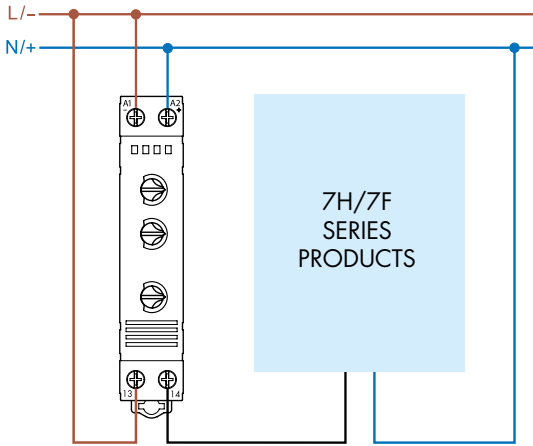
Heating control - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

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.

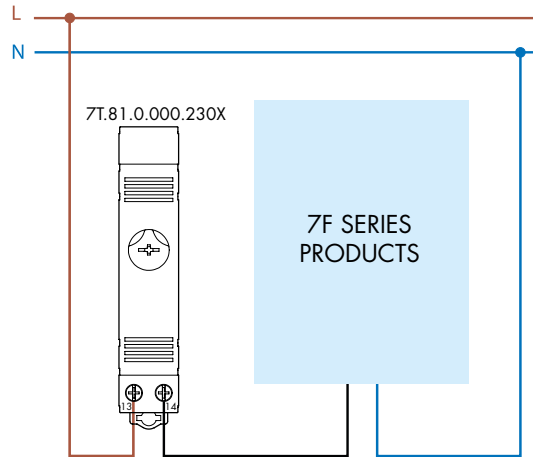
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Wiring diagrams

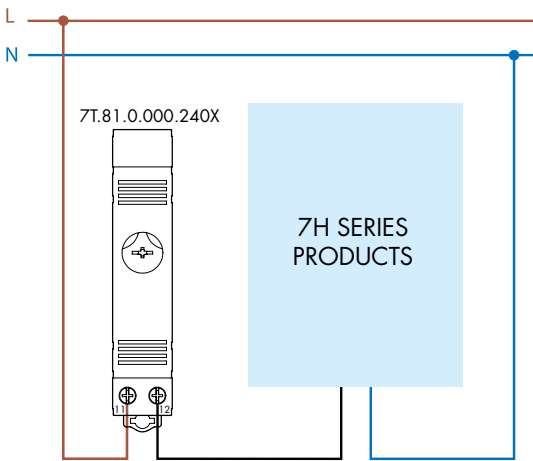
7T.51



7T.81...230x



7T.81...240x

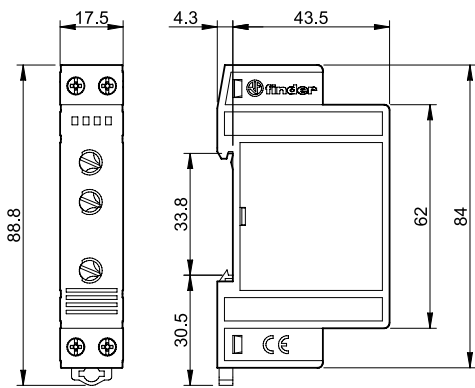


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Outline drawings

Type 7T.51

Screw terminal



Type 7T.81

Screw terminal

