

ENCLOSURE HEATER THERMOSTAT, NC

TAGS: THERMOSTAT

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

7T.51/7T.81
Box clamp



* 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/V | | | |
| 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)

NEW 7T.51



7T.81.0.000.240x



7T.81.0.000.230x



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 | 7T | | 8 | 1 | 0 | 000 | | | 2 | 4 | 03 | Control function | | | |
| Type | | | 5 | Thermo-Hygrostatic control | | | | | | 60 | 60 = Multifunction (only 7T.51) | | | | |
| | | | 8 | Temperature control | | | | | | 01 | 01 = -20...+40 °C (only 7T.81) | | | | |
| No. of contacts | | | 1 = 1 contact | | | | | | 02 | 02 = -20...+60 °C (only 7T.81) | | | | | |
| Voltage type | | | 0 = AC/DC (only 7T.51) | | | | | | 03 | 03 = 0...+60 °C (only 7T.81) | | | | | |
| | | | 0 = No operating voltage required (only 7T.81) | | | | | | | | | | | | |
| Rated operating voltage | | | 230 = 110...240 V (only 7T.51) | | | | | | | | | | | | |
| | | | 000 = No operating voltage required | | | | | | | | | | | | |

Contact configuration

- 3 = 1 NO contact
- 4 = 1 NC contact

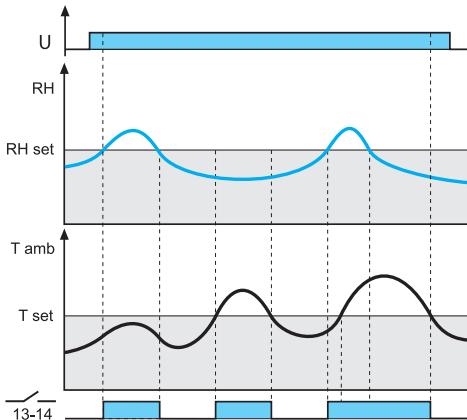
Monitoring function

- 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 | | 7T.51 | | 7T.81 | |
| Vibration resistance | g | — | | 16 | |
| Shock resistance | g | — | | 20 | |
| 7T.51/7T.81 | | | | | |
| Screw torque | Nm | 0.5 | | 0.5 | |
| Max. wire size | | solid cable | | stranded cable | |
| | mm ² | 1 x 4 / 2 x 2.5 | | 1 x 4 / 2 x 2.5 | |
| | AWG | 1 x 12 / 2 x 14 | | 1 x 12 / 2 x 14 | |
| Wire strip length | mm | 9 | | 9 | |

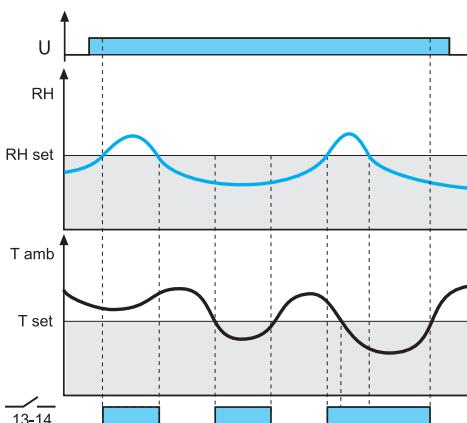
Functions 7T.51



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).

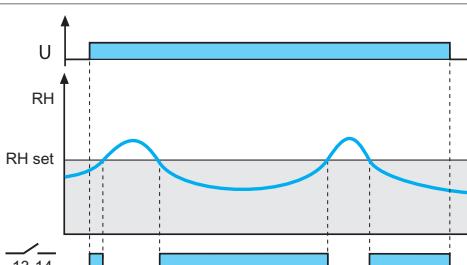
When contact is close, LED is ON



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).

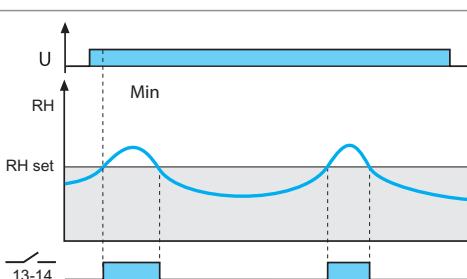
When contact is close, LED is ON



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

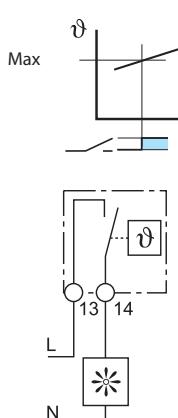
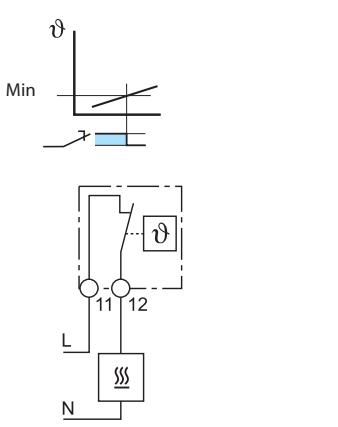


HM: RH > RHset

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.

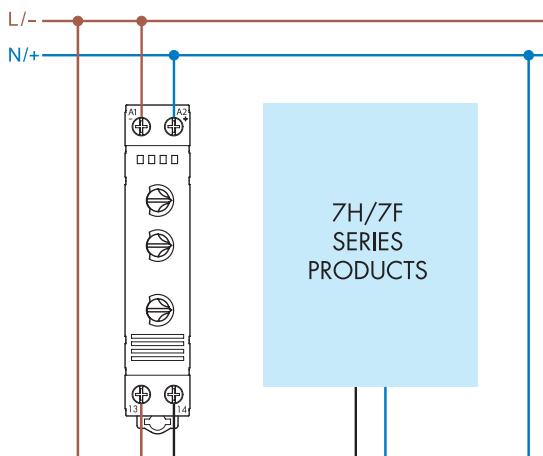
The contact will open when this set temperature is exceeded.

Ventilation control - Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling.

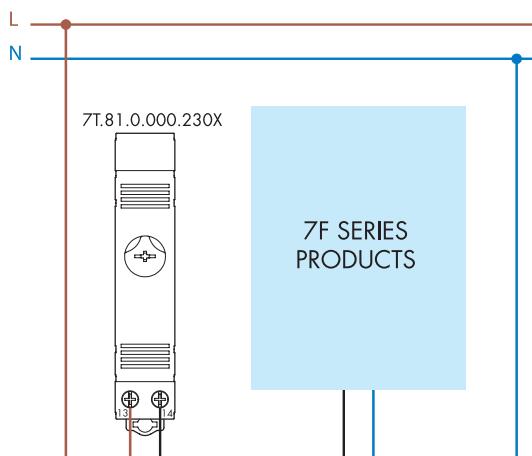
The contact will open when the temperature falls below this set temperature.

Wiring diagrams

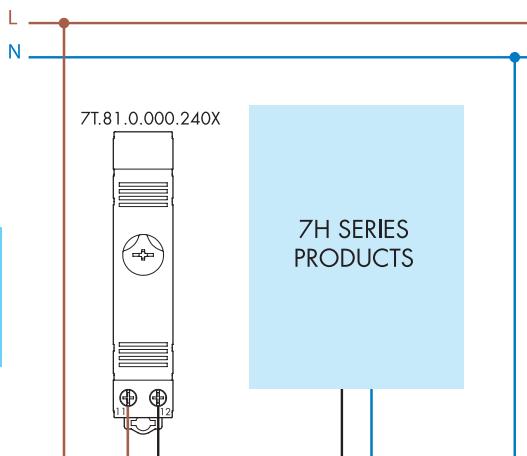
Type 7T.51



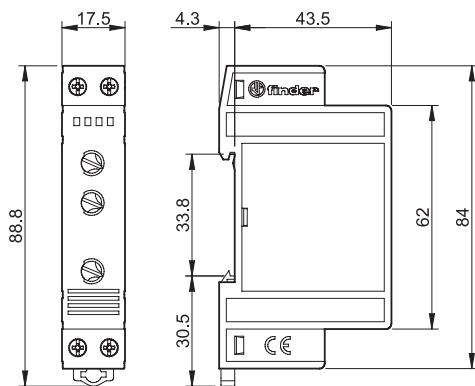
Type 7T.81...230x



Type 7T.81...240x



Outline drawings

Type 7T.51
Box clampType 7T.81
Box clamp