

# 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

\* 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 10/20	10/20	10/20
Rated voltage/ 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: 24/110/220 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
<b>Coil specifications</b>			
Nominal Voltage	V AC/DC 110...240	—	—
Rated Power	VA (50Hz)/W 1.8/0.44	—	—
Operating range	V AC/DC 88...264	—	—
<b>Temperature specifications *</b>			
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	—	—
<b>Humidity specifications **</b>			
Setting range (humidity)	% 50...90	—	—
Hysteresis	% 4 ± 2	—	—
Setting accuracy	% 5	—	—
<b>Technical data</b>			
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
<b>Approvals</b> (according to type)	CE UK EAC CUL <sup>®</sup> US	CE UK EAC CUL <sup>®</sup> US	CE UK EAC CUL <sup>®</sup> US

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### Ordering information

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



**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)

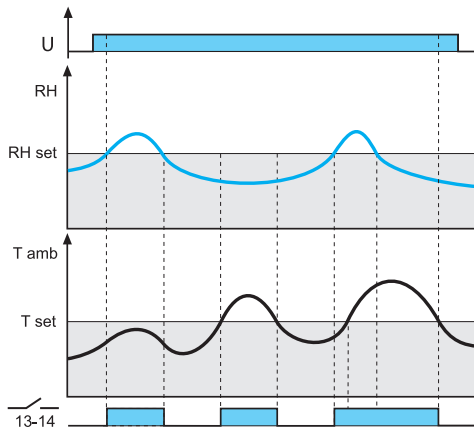
**Contact configuration**  
3 = 1 NO contact  
4 = 1 NC contact

**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 <sup>2</sup>	1 x 2.5	1 x 1.5
	AWG	1 x 12	1 x 16

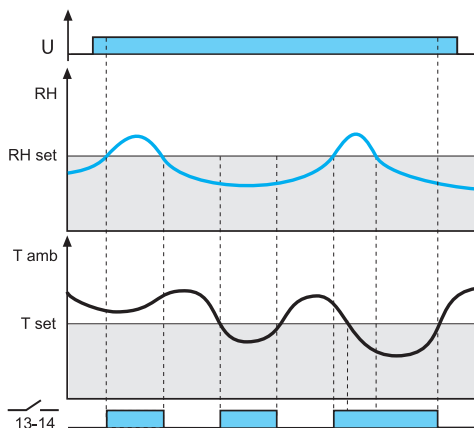
### Functions 7T.51



#### 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

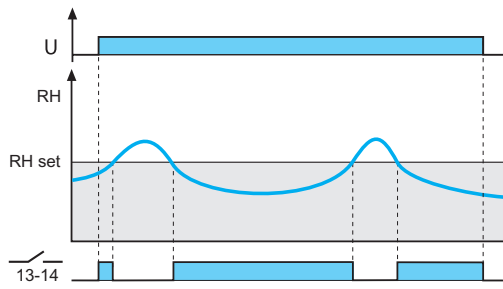


#### TH: RH > RHset OR Tamb < Tset

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

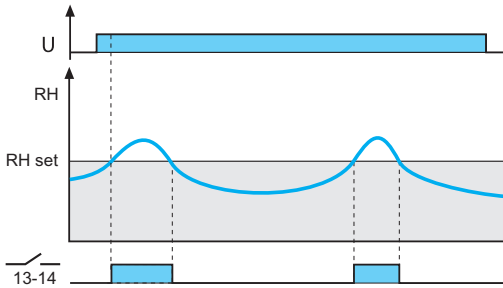
### Functions 7T.51



#### HL: $RH < RH_{set}$

The contact 13-14 closes if the ambient humidity (RH) is < of set humidity ( $RH_{set}$ )

When contact is close, LED is ON

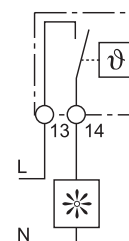
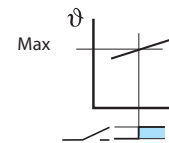
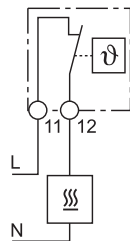
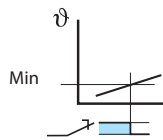


#### HM: $RH > RH_{set}$

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity ( $RH_{set}$ )

When contact is close, LED is ON

### Functions 7T.81



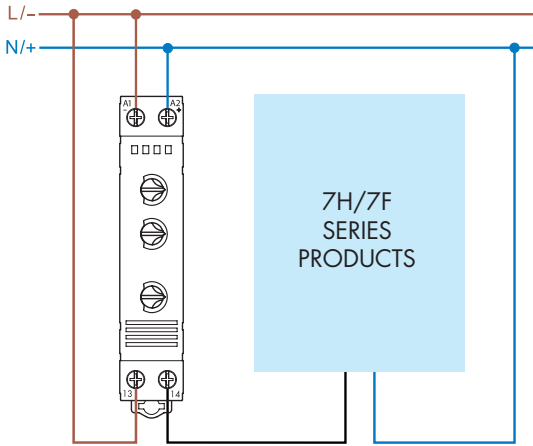
**Heating control** - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

**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.

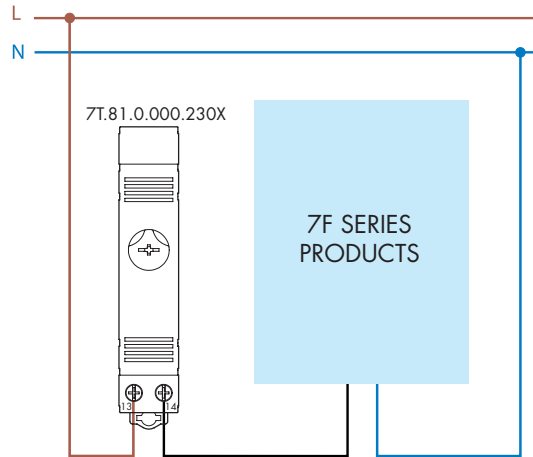
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## Wiring diagrams

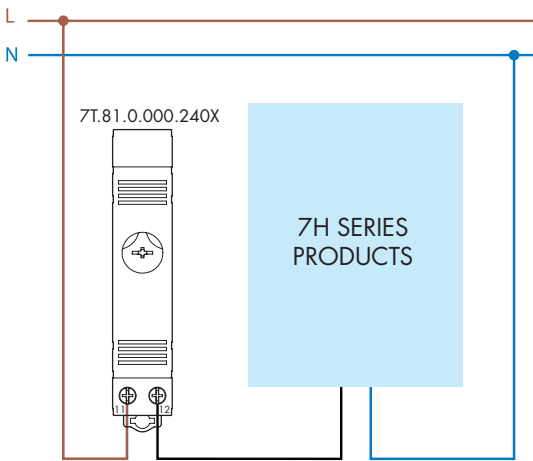
7T.51



7T.81...230x



7T.81...240x

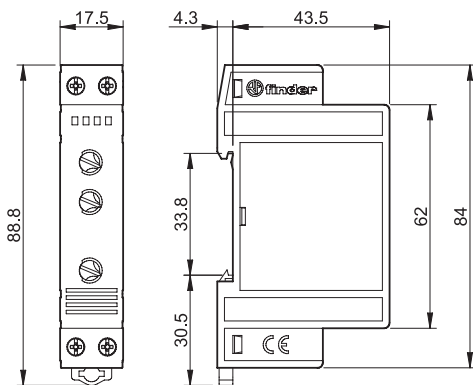


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## Outline drawings

Type 7T.51

Screw terminal



Type 7T.81

Screw terminal

