

# 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	1 NC	1 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: 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)****NEW 7T.51**

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

**7T.81.0.000.240x**

- Heating control

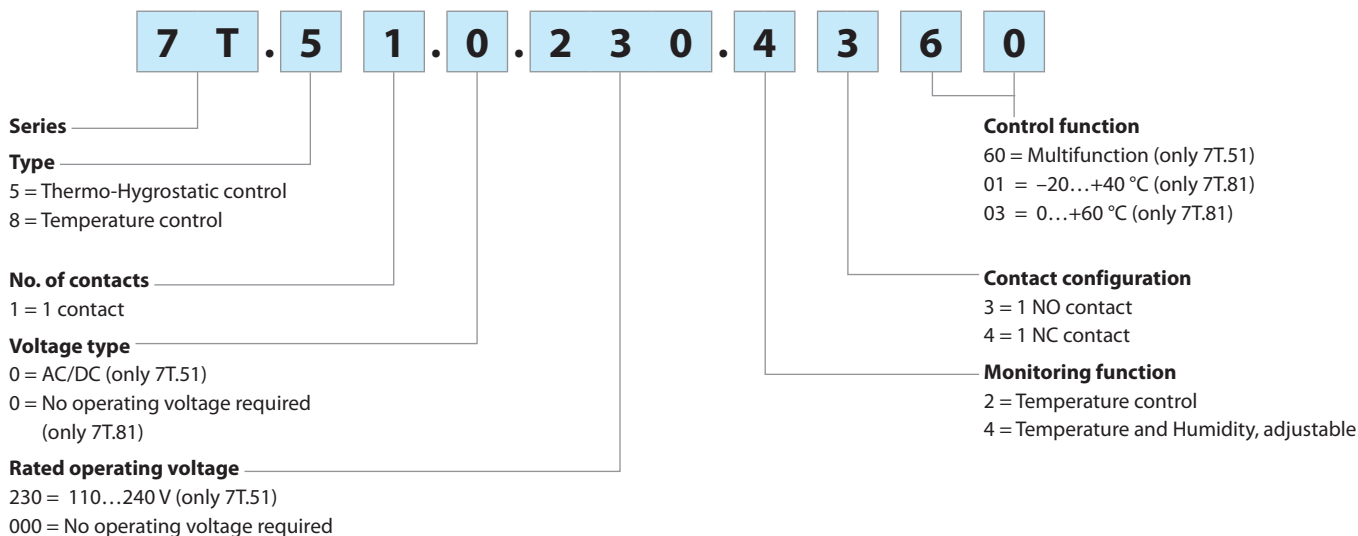
**7T.81.0.000.230x**

- Ventilation control

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## Ordering information

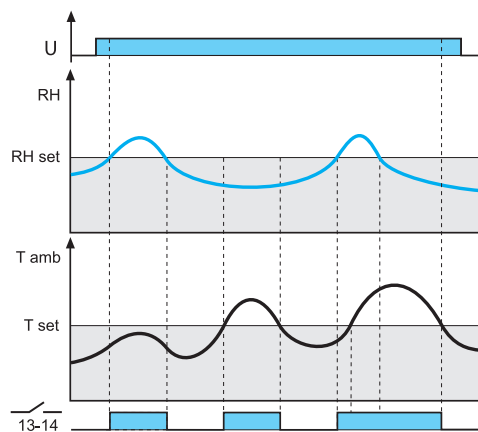
Example: 7T Series, Thermo-Hygrostat for temperature and humidity control, 110...240 V AC/DC, Multifunction, 35 mm rail (EN 60715) mount.



## 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

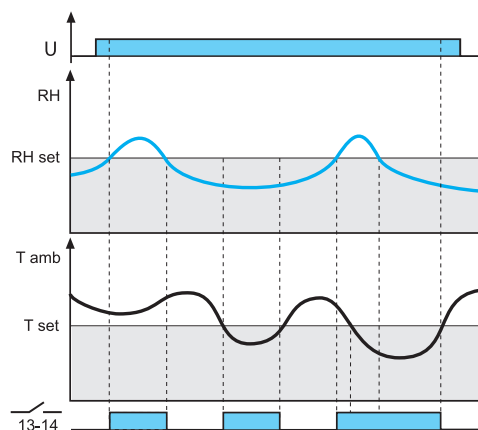
## Functions 7T.51



### 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

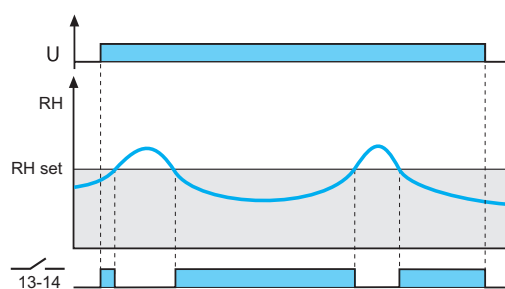


### TH: RH > RHset OR Tamb < Tset

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

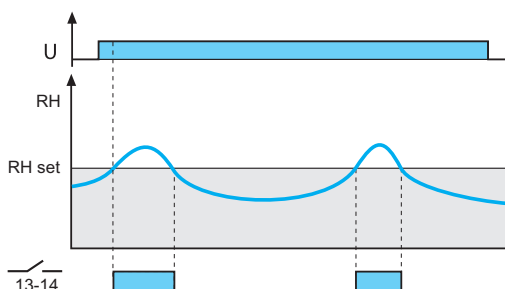
## Functions 7T.51



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

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

When contact is close, LED is ON

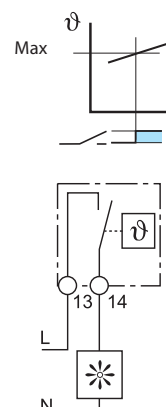
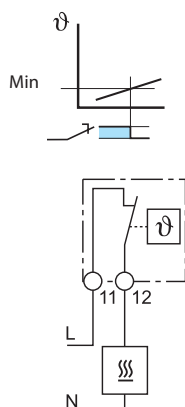


### HM: $RH > RH_{set}$

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

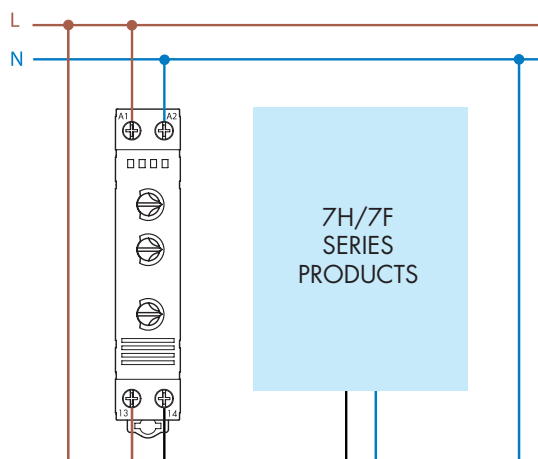


**Heating control** - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

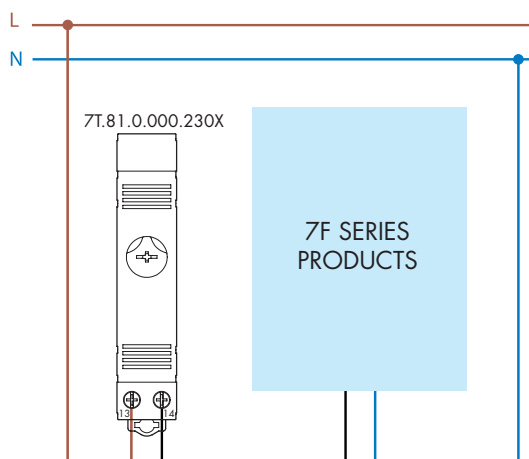
**Ventilation control** - Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this set temperature.

## Wiring diagrams

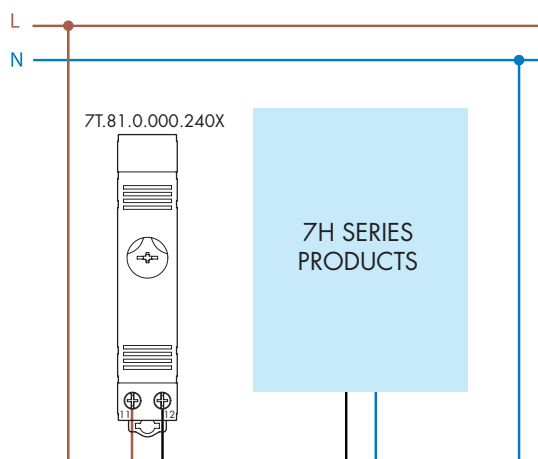
7T.51



7T.81...230x



7T.81...240x

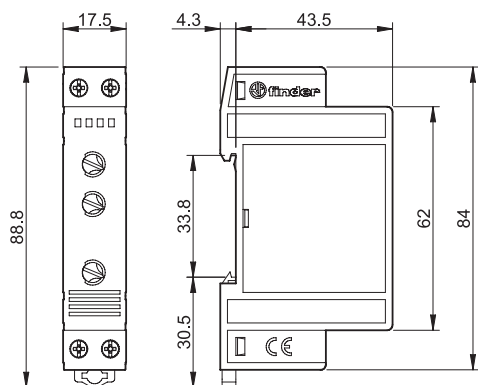


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## Outline drawings

Type 7T.51

Screw terminal



Type 7T.81

Screw terminal

