

# 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/ 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 <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.



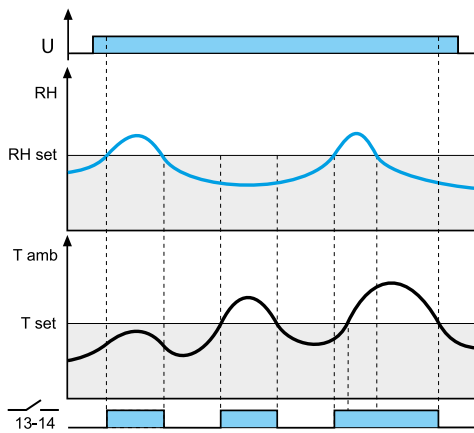
**Series**  
**Type**  
 5 = Thermo-Hygrostatic control  
 8 = Temperature control  
**No. of contacts**  
 1 = 1 contact  
**Voltage type**  
 0 = AC/DC (only 7T.51)  
 0 = No operating voltage required (only 7T.81)  
**Rated operating voltage**  
 230 = 110...240 V (only 7T.51)  
 000 = No operating 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		7T.51/7T.81	
Screw torque	Nm	0.5	0.5
Max. wire size		solid cable	stranded cable
	mm <sup>2</sup>	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

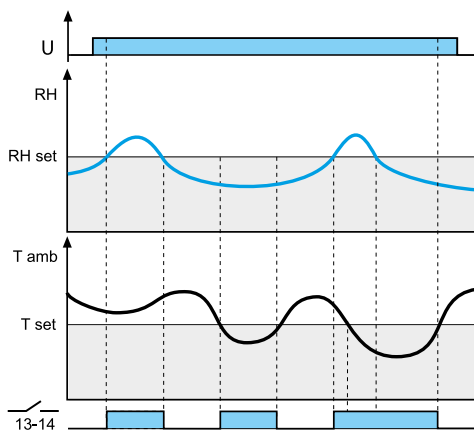
### Functions 7T.51



#### 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

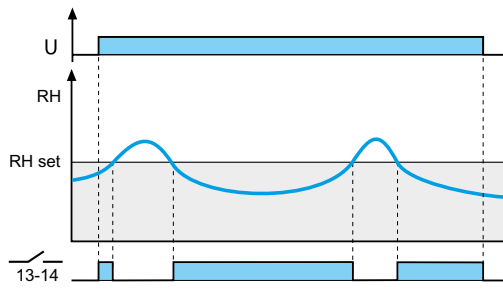


#### TH: RH > RHset OR Tamb < Tset

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

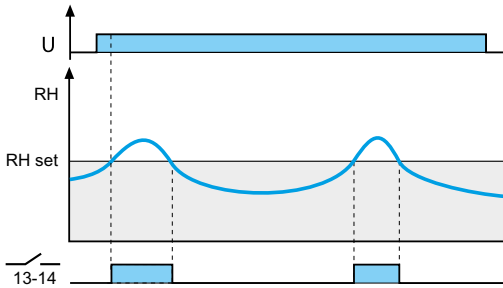
### Functions 7T.51



#### 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

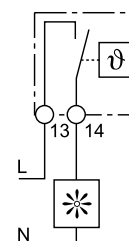
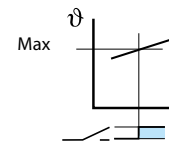
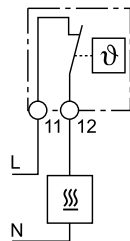
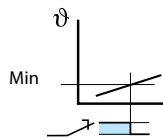


#### HM: $RH > RH_{set}$

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



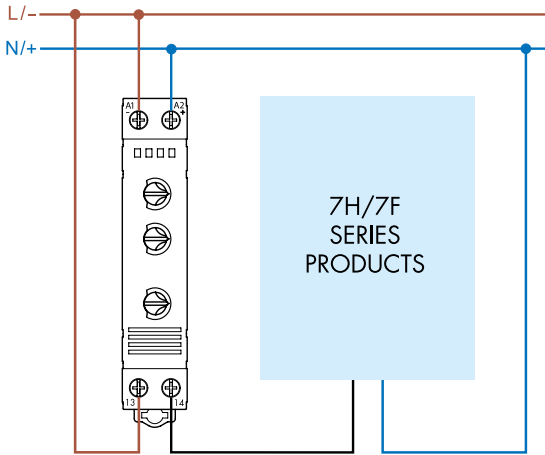
**Heating control** - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

**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.

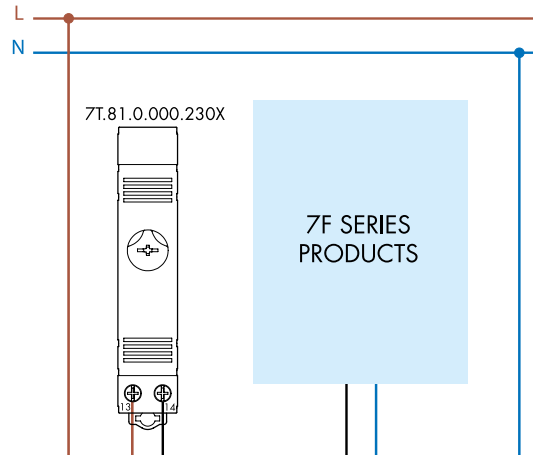
G

## Wiring diagrams

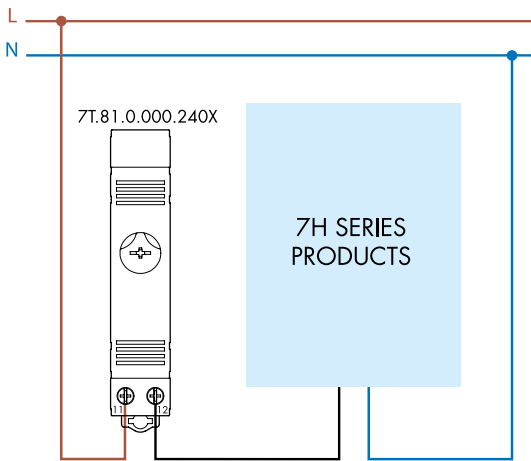
7T.51



7T.81...230x



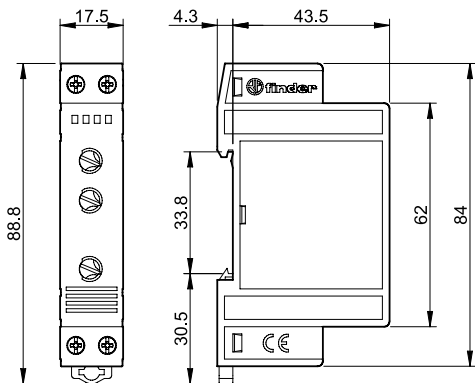
7T.81...240x



G

## Outline drawings

Type 7T.51  
Box clamp



Type 7T.81  
Box clamp

