



**finder**<sup>®</sup>

SWITCH TO THE FUTURE

# 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

## Ordering information

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

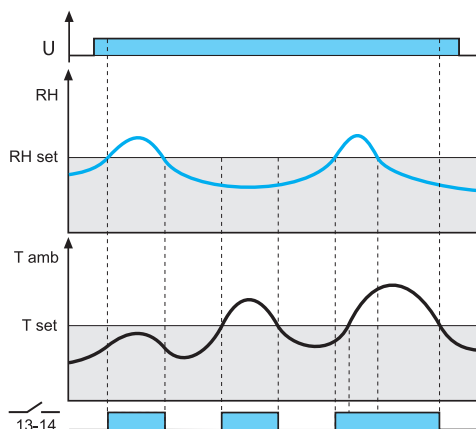
7 T . 5 1 . 0 . 2 3 0 . 4 3 6 0

<b>Series</b>	7 T	<b>Control function</b>	60 = Multifunction (only 7T.51) 01 = -20...+40 °C (only 7T.81) 03 = 0...+60 °C (only 7T.81)
<b>Type</b>	5	<b>Contact configuration</b>	3 = 1 NO contact 4 = 1 NC contact
5 = Thermo-Hygrostatic control 8 = Temperature control		<b>Monitoring function</b>	2 = Temperature control 4 = Temperature and Humidity, adjustable
<b>No. of contacts</b>	1		
1 = 1 contact			
<b>Voltage type</b>	0		
0 = AC/DC (only 7T.51) 0 = No operating voltage required (only 7T.81)			
<b>Rated operating voltage</b>	230		
230 = 110...240 V (only 7T.51) 000 = No operating voltage required			

## 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

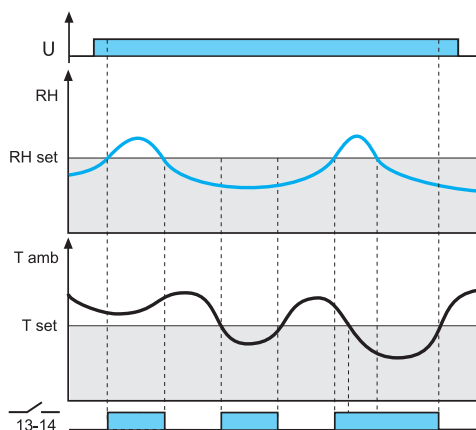
## Functions 7T.51



### HT: $RH > RH_{set}$ 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 ( $T_{amb}$ ) is > of set temperature ( $T_{set}$ ).

When contact is close, LED is ON

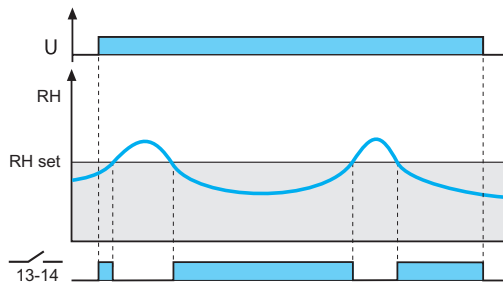


### TH: $RH > RH_{set}$ OR $T_{amb} < T_{set}$

The contact 13-14 closes if the ambient humidity (RH) is > of set humidity (RHset) OR if the ambient temperature ( $T_{amb}$ ) is < of set temperature ( $T_{set}$ ).

When contact is close, LED is ON

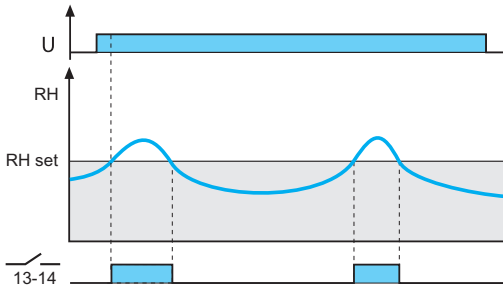
**Functions 7T.51**



**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

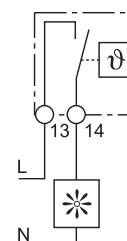
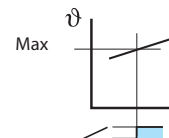
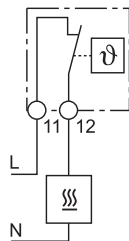
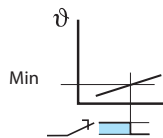


**HM:  $RH > RH_{set}$**

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**



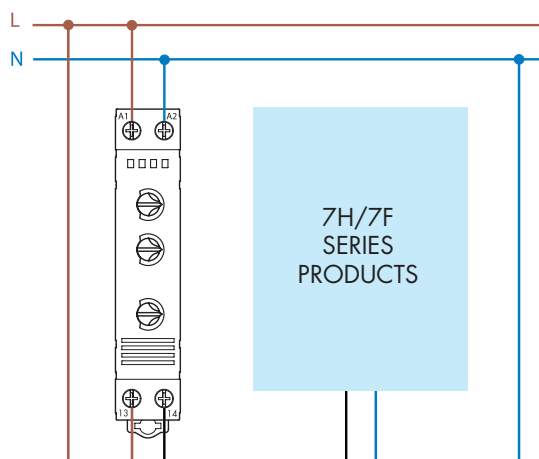
**Heating control** - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat. The contact will open when this set temperature is exceeded.

**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.

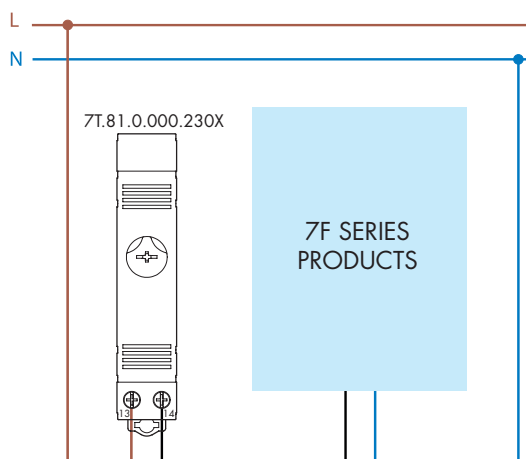
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## Wiring diagrams

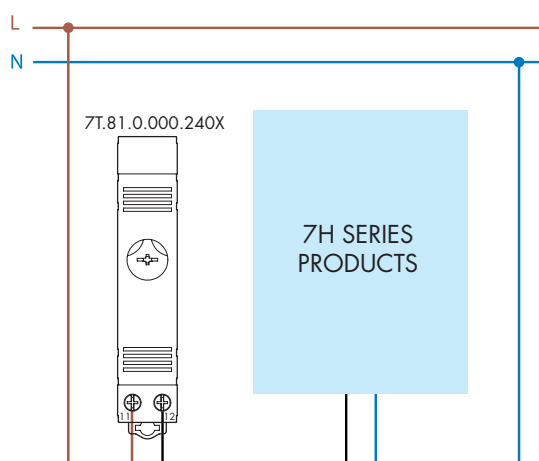
7T.51



7T.81...230x



7T.81...240x

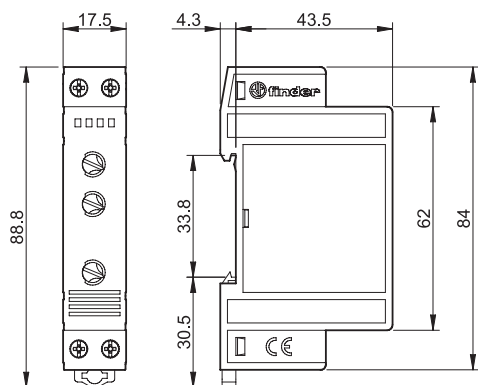


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## Outline drawings

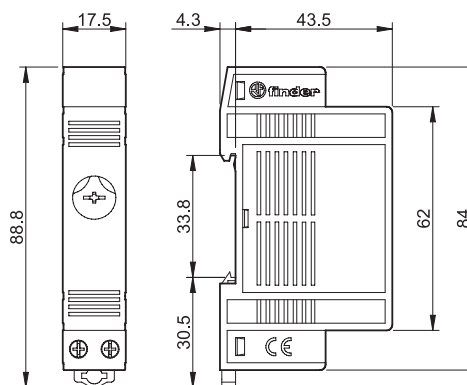
Type 7T.51

Screw terminal



Type 7T.81

Screw terminal



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[22.44.0.230.4710](#) [10.61.8.230.0000](#) [55.14.9.012.0000](#) [48.31.7.024.0050SPA](#) [22.34.0.012.4320](#) [22.32.0.048.4320](#)