

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
Rated voltage/ Maximum switching voltage	V AC	250/400	250/250
Rated load AC1	VA	2500	2500
Rated load AC15 (230 V AC)	VA	500	250
Single phase motor rating AC3 (230 V AC)	kW	—	1.1
Breaking capacity DC1: 24/110/220 V	A	10/0.3/0.12	1/0.3/0.15
Minimum switching load	mW (V/mA)	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

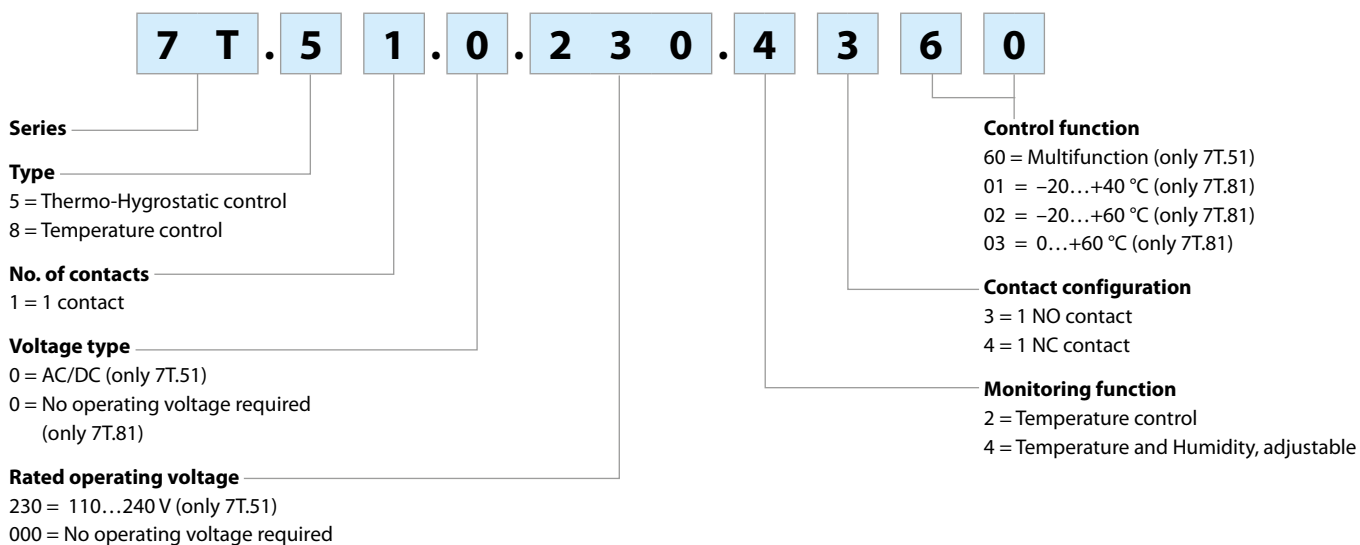
Electrical life at rated load AC1	cycles	100 · 10 ³	100 · 10 ³			100 · 10 ³		
Ambient temperature range	°C	-25...+60	-45...+80			-45...+80		
Protection category		IP 20	IP 20			IP 20		

Approvals (according to type)



Ordering information

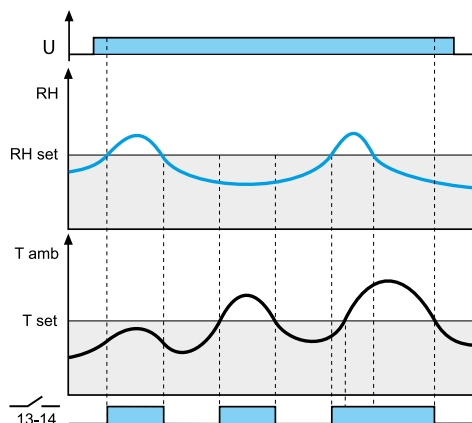
Example: 7T Series, Thermo-Hygrostat for temperature and humidity control, 110...240 V AC/DC, Multifunction, 35 mm rail (EN 60715) mount.



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		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

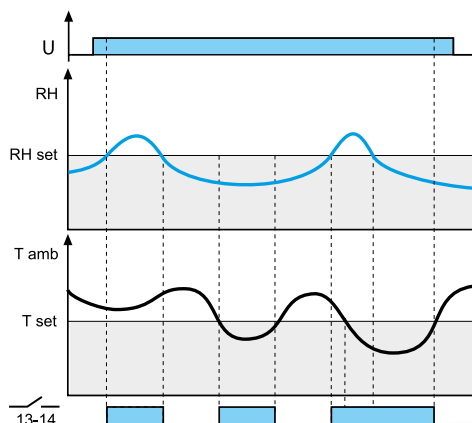


HT: $RH > RH_{set}$ or $T_{amb} > T_{set}$

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 (Tamb) is $>$ of set temperature (Tset).

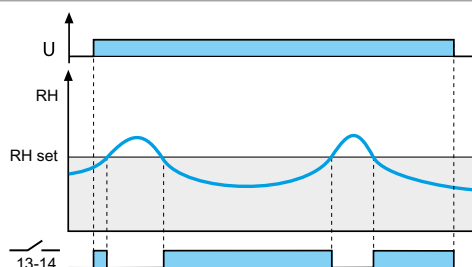
When contact is close, LED is ON



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 (Tamb) is $<$ of set temperature (Tset).

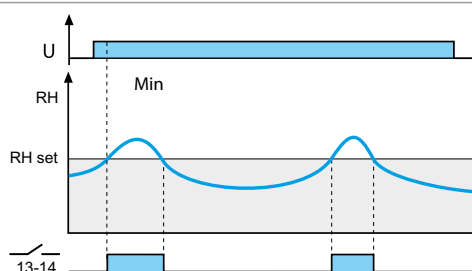
When contact is close, LED is ON



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



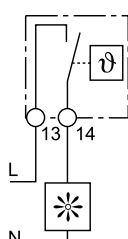
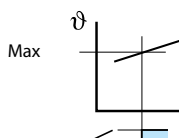
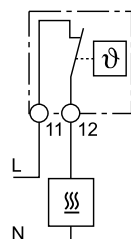
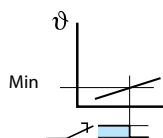
HM: $RH > RH_{set}$

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

When contact is close, LED is ON

G

Functions 7T.81

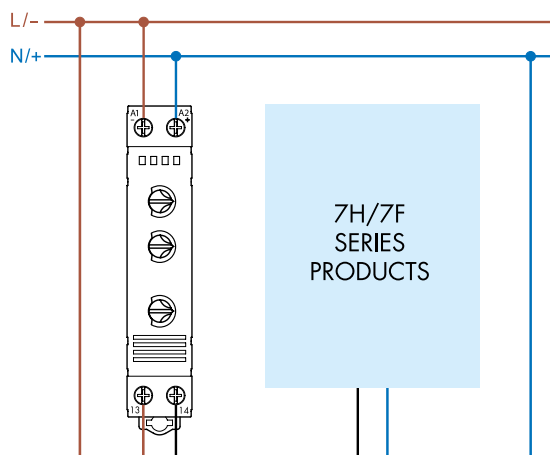


Heating control - Should the panel temperature fall below the (minimum) set temperature the contact will close to call for heat.
The contact will open when this set temperature is exceeded.

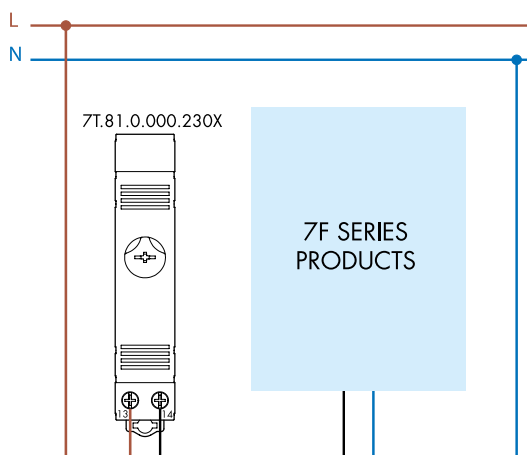
Ventilation control - Should the panel temperature exceed the (maximum) set temperature then the contact will close to call for cooling.
The contact will open when the temperature falls below this set temperature.

Wiring diagrams

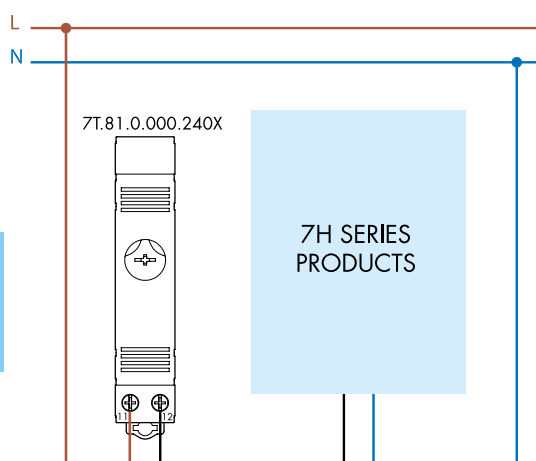
Type 7T.51



Type 7T.81...230x

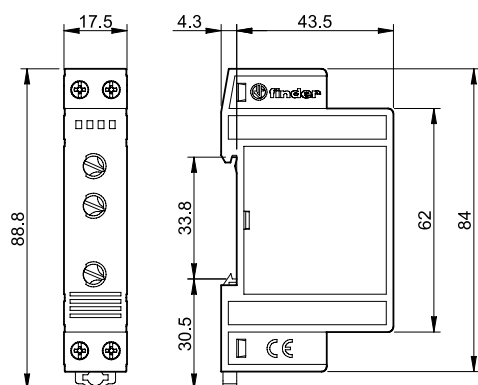


Type 7T.81...240x



Outline drawings

Type 7T.51
Box clamp



Type 7T.81
Box clamp

