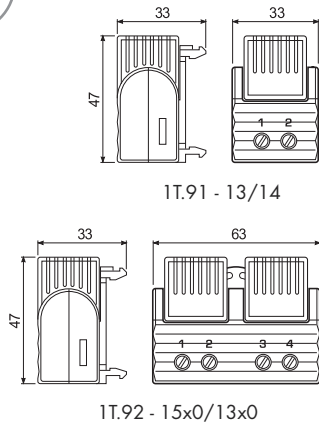


Features

Panel Thermostat

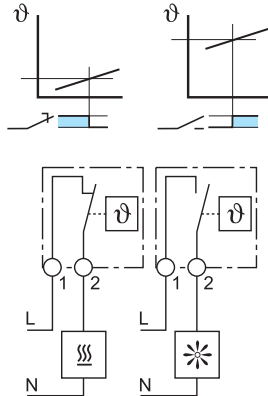
- Small, compact size
- Snap action thermostatic Bimetal sensor
- Long electrical life
- No power supply required
- Wide temperature setting range for types with temperature selector potentiometer
- Red colour for heating, blue for cooling
- 35 mm rail (EN 60715) mount



IT.91 - 13/14



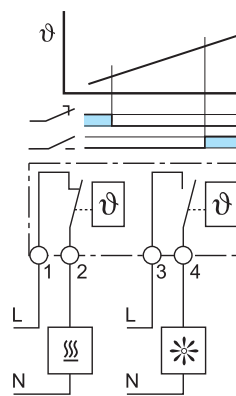
- Fixed Thermostat
- Heating control* or
- Cooling/Ventilation control*



IT.92-15x0



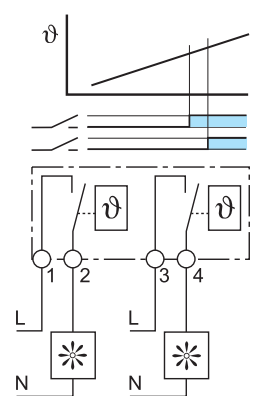
- Fixed combination Thermostat
- Heating control* and
- Cooling/Ventilation control*



IT.92-13x0



- Fixed combination Thermostat
- Cooling/Ventilation 1 control* and
- Cooling/Ventilation 2 control*



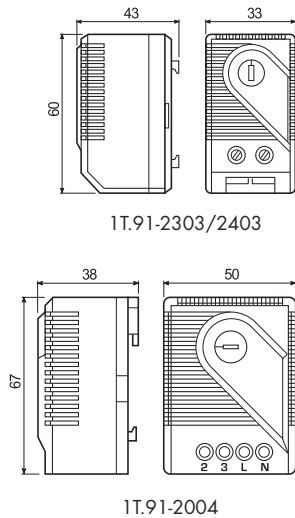
* **Heating control** - Should the panel temperature fall below the (minimum) temperature the contact will close to call for heat. The contact will open when this temperature is exceeded.
Ventilation control - Should the panel temperature exceed the (maximum) temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this temperature.

Contact specification	IT.91 - 13/14		IT.92-15x0		IT.92-13x0	
Contact configuration	1 NC* or 1 NO*		1 NC* and 1 NO*		2 NO*	
Rated current/Maximum peak current A	5/10		5/10		5/10	
Rated voltage/Maximum switching voltage V AC	250/250		250/250		250/250	
Rated load AC1 VA	1,250		1,250		1,250	
Rated load AC15 (230 V AC) VA	250		250		250	
Single phase motor rating AC3 (230 V A C) kW	0.125		0.125		0.125	
Breaking capacity DC1: 30/110/220 V A	1/0.3/.15		1/0.3/0.15		1/0.3/0.15	
Minimum switching load mW (V/mA)	300 (5/5)		300 (5/5)		300 (5/5)	
Standard contact material	AgNi		AgNi		AgNi	
Temperature control						
Type (popular types)	IT.91..1406	IT.91..1308	IT.92.0.000.1510		IT.92.0.000.1330	
	NC*	NO*	NC*	NO*	1. NC*	2. NO*
Switch On temperature (heating)	+5°C ±5K	—	+5°C ±5K	—	—	—
Switch Off temperature (heating)	+15°C ±5K	—	+15°C ±5K	—	—	—
Switch On temperature (cooling/ventilation)	—	+50°C ±6K	—	+50°C ±6K	+50°C ±6K	+60°C ±6K
Switch Off temperature (cooling/ventilation)	—	+40°C ±7K	—	+40°C ±7K	+40°C ±7K	+50°C ±7K
Type (alternative types)	IT.91..1407	IT.91..1309	IT.92.0.000.1520			
	NC*	NO*	NC*	NO*	—	
Switch On temperature (heating)	+15°C ±5K	—	+15°C ±5K	—	—	
Switch Off temperature (heating)	+25°C ±5K	—	+25°C ±5K	—	—	
Switch On temperature (cooling/ventilation)	—	+60°C ±6K	—	+60°C ±6K	—	
Switch Off temperature (cooling/ventilation)	—	+50°C ±7K	—	+50°C ±7K	—	
Technical data						
Electrical life at rated load cycles	100,000		100,000		100,000	
Ambient temperature °C	-20...+80		-20...+80		-20...+80	
Protection category	IP 20		IP 20		IP 20	
Approvals (according to type)						

Features

Panel Thermostat

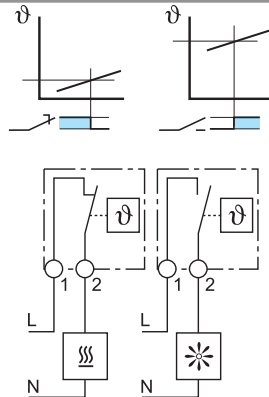
- Small, compact size
- Snap action thermostatic Bimetal sensor
- Wide temperature setting range
- Long electrical life
- No power supply required
- Thermal feedback (1T.91-2004) option;
- Use the N-connection to achieve reduced switching hysteresis (approx. 0.5 K)
- 35 mm rail (EN 60715) mount



1T.91 - 2303/2403



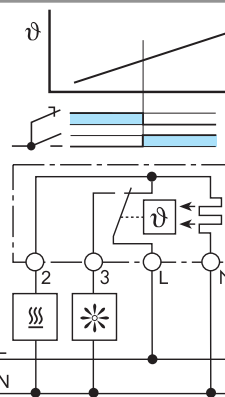
- Adjustable thermostat
- Heating control* or
- Cooling/Ventilation control*



1T.91-2004



- Adjustable thermostat
- Heating control* or alternatively
- Cooling/Ventilation control*



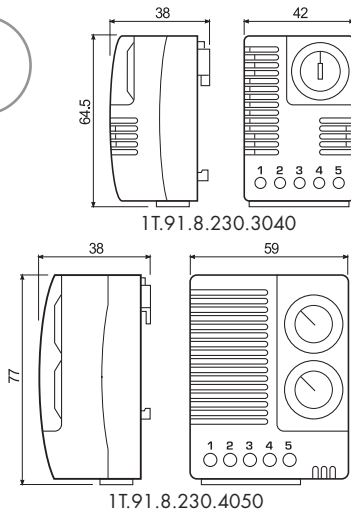
* **Heating control** - Should the panel temperature fall below the (minimum) temperature the contact will close to call for heat. The contact will open when this temperature is exceeded.
Ventilation control - Should the panel temperature exceed the (maximum) temperature then the contact will close to call for cooling. The contact will open when the temperature falls below this temperature.

Contact specification					
Contact configuration		1 NC* or 1 NO*		1 CO*	
Rated current/Maximum peak current	A	5/10		5/10	
Rated voltage/Maximum switching voltage V AC		250/250		250/250	
Rated load AC1	VA	1,250		1,250	
Rated load AC15 (230 V AC)	VA	250		250	
Single phase motor rating AC3 (230 V A C)	kW	0.125		0.125	
Breaking capacity DC1: 30/110/220 V	A	1/0.3/0.15		1/0.3/0.15	
Minimum switching load	mW (V/mA)	500 (12/10)		500 (12/10)	
Standard contact material		AgNi		AgCu	
Temperature control					
Type		1T.91..2403	1T.91..2303	1T.91.0.000.2004	
		NC	NO	CO	
Type (popular types)		—	+0...+60	+5...+60	
Switch On temperature range (Cooling)	°C	—	7 ± 4	4 ± 1.5	
Switch Off temperature difference	K	+5...+60	—	+5...+60	
Switch Off temperature range (Heating)	°C	7 ± 4	—	4 ± 1.5	
Switch Off temperature difference	K	—	—	—	
Technical data					
Electrical life at rated load	cycles	100,000		100,000	
Ambient temperature	°C	-45...+80		-20...+80	
Protection category		IP 20		IP 20	
Approvals (according to type)					

Features

Humidity and Temperature controllers for mounting in switch cabinets

- Small, compact size
- Power supply 230 V AC
- LED indication, lit when the NO contact is closed
- Electronic controller with relay output
- Power supply and relay output are galvanically separated
- Adjustable switch point setting for temperature and relative humidity (RH)
- 35 mm rail (EN 60715) mount



IT.91.8.230.3040

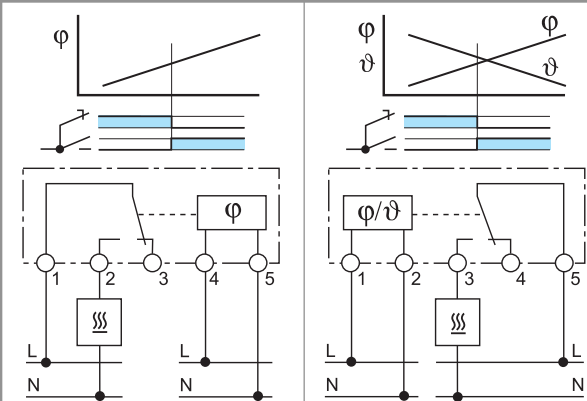


- Adjustable Hygrostat
- Ventilation control and/or
- Heating control*

IT.91.8.230.4050



- Adjustable Hygro- and Thermostat
- Ventilation control and/or
- Heating control*



The normally open contact will close if the humidity is above the RH set value.

The normally open contact will close if the humidity is above, and/or the temperature is below, the respective set values.

Contact specification			
Contact configuration		1 CO*	1 CO*
Rated current/Maximum peak current	A	6/8	6/6
Rated voltage/Maximum switching voltage V AC		250/250	250/250
Rated load AC1	VA	1,500	1,500
Rated load AC15 (230 V AC)	VA	200	150
Single phase motor rating AC3 (230 V A C)	kW	0.125	0.125
Breaking capacity DC1: 30/110/220 V	A	4/0.2/0.12	4/0.2/0.12
Minimum switching load	mW (V/mA)	500 (12/10)	500 (12/10)
Standard contact material		AgNi	AgSnO ₂
Monitoring humidity / temperature			
Switch On temperature range (Heating)	°C	—	+0...+60
Switch Off temperature difference	K	—	2 ± 1**
Switch On humidity range (Cooling/Ventilation)	% rel. (RH)	40...90	50...90
Switch Off humidity difference	% rel. (RH)	5 ± 1**	4 ± 1**
Reaction time, about	s	5	5
Technical data			
Supply voltage	V AC (50/60 Hz)	120*** - 230	120*** - 230
*** 120 V AC (50/60 Hz) on request			
Electrical life at rated load AC1 (NO-/ NC contact)	cycles	50,000/50,000	100,000/50,000
Ambient temperature	°C	0...+60	0...+60
Protection category		IP 20	IP 20
Approvals (according to type)			

** at 25°C and 50 % RH.

Note: If the switch cabinet temperature falls, the relative humidity (RH) will increase. To protect against damage and impaired insulation it is necessary to run the heating system until the RH falls to a non-critical value.

Ordering information

Thermostat and Hygrostat

Example: 1T Series - thermostat to control cooling within a switch cabinet, about an adjustable temperature set within the range of 0...+60°C, 1 NO contact, for industrial applications and 35 mm rail (EN 60715) mounting.

1 T . 9 1 . 0 . 0 0 0 . 2 3 0 3

<p>Series _____</p> <p>Type _____ 9 = For 35 mm rail (EN 60715) mounting</p> <p>No. of poles _____ 1 = 1 contact 2 = 2 contacts</p> <p>Supply version _____ 0 = no power supply required 8 = AC (50/60 Hz)</p> <p>Supply voltage _____ 000 = no supply voltage 230 = 230 V AC</p> <p>Control function _____ 1 = Temperature, fixed 2 = Temperature, adjustable 3 = Relative humidity (RH), adjustable 4 = Relative humidity (RH) and Temperature, adjustable</p>	<p>Single monitoring function (temperature only) 0 = (+35 – +25)°C 1 = (–20...+30)°C 2 = (–10...+50)°C 3 = (0...+60)°C 4 = (+5...+60)°C 5 = (+20...+80)°C 6 = (+15 – +5)°C 7 = (+25 – +15)°C 8 = (+50 – +40)°C 9 = (+60 – +50)°C</p> <p>Multiple monitoring functions (Relative humidity / Temperature / Temperature) 0 = – / – / – 1 = – / (+15 – +5)°C / (+50 – +40)°C 2 = – / (+25 – +15)°C / (+60 – +50)°C 3 = – / (+50 – +40)°C / (+60 – +50)°C 4 = (40...90) % RH – / – 5 = (50...90) % RH / (0...+60) °C / –</p> <p>Contact circuit 0 = 1 CO 3 = 1 NO 4 = 1 NC 5 = 1 NO + 1 NC</p>
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Preferred selections for best availability are shown in **bold**.

1T.91.0.000.1300*	1T.92.0.000.1510	1T.91.0.000.2303	1T.91.8.230.3040
1T.91.0.000.1308	1T.92.0.000.1520	1T.91.0.000.2403	1T.91.8.120.3040
1T.91.0.000.1309	1T.92.0.000.1330	1T.91.0.000.2004	1T.91.8.230.4050
1T.91.0.000.1406			1T.91.8.120.4050
1T.91.0.000.1407			

* Type 1T.91.0.000.1300 special for temperature sensitive electronics. Switch On Cooling / Ventilation at +35 °C ±6K. Switch Off Cooling / Ventilation at +25 °C ±7K. All other specifications are the same as by Type 1T.91.0.000.1308.

Technical data

Insulation according to EN 61810-1			
Insulation		1T.91.8.xxx.3040/4050	All "Thermostat only" devices
- between power supply and contact set	V AC	2,500 V	—
- dielectric strength between open contacts	V AC	1,000 V	500
Conducted disturbance immunity			
1T.91.8.xxx.3040 / 1T.91.8.xxx.4050		Regulation	Rated impulse withstand voltage
Burst (5-50 ns, 5 kHz),	- supply connectors	EN 61000-4-4	4 kV
Surges (1.2/50 µs), on supply	- differential mode	EN 61000-4-5 4	4 kV
Other data			
Screw torque	Nm	0.5	0.5
Max. wire size		solid cable	stranded cable
	mm ²	1x2.5	1x1.5
	AWG	1x12	1x16