

# NOVASTAT / NOVAMASTER EL

ELECTRONIC ROOM THERMOSTATS AND CONNECTOR MODULES



## ADVANTAGES

- Easy to operate
- Noiseless Triac circuit
- Units for 230V and 24V power supply
- Integrated derivative action control or PI control (adjustable)
- Simple wiring through the NovaMaster EL Basic, Logic and SlaveBox terminal modules
- Universal NovaStat EL Quattro unit for the 230V or 24V voltage range, actuators normally closed (NC) and actuators normally open (NO)

Individual control of room temperature.

## DESCRIPTION

Room thermostats in combination with Taconova NovaDrive or TopDrive actuators provide a constant room temperature in closed and dry rooms. The Taconova room thermostat range, classified according to price/performance, offers the correct solution for individual needs.

The basic version **NovaStat EL Basic** for the control of 230 V NC actuators covers the most common application range. The **NovaStat EL Digital** version displays the set and actual values on a digital display.

The **NovaStat EL Quattro** version combines various applications in one unit. For example, 230 V or 24 V NC and NO actuators can be controlled by this room thermostat.

Individual heat regulation as required by the operator is achieved by means of the programmable digital **NovaStat EL Week** clock thermostat. The time duration of the lowering mode can be set in the week program by means of the integral timer.

The connection of the room thermostats to the terminal module **NovaMaster EL Basic and/or Logic** is simple and uncomplicated. Further convenient settings are possible by mean of the optional plug-in **NovaMaster EL Timer**.

## INSTALLATION POSITION

The thermostats are mounted in the respective room while the connector modules are mounted close to the manifold.

## OPERATION

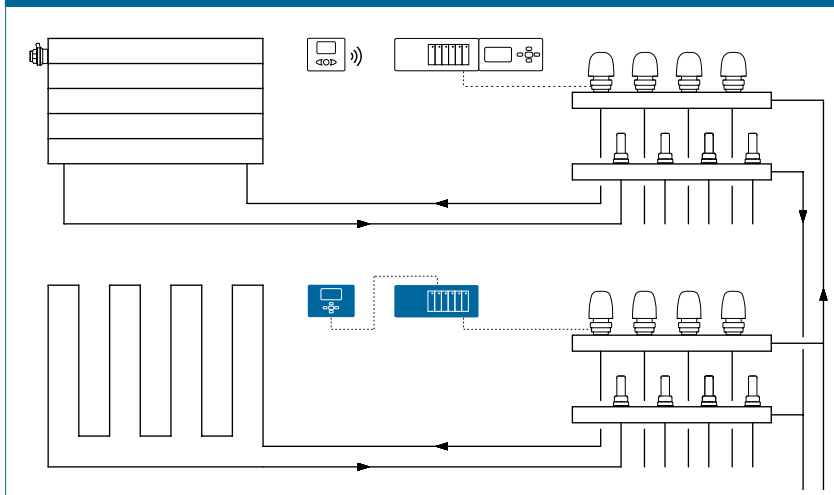
By means of an NTC sensor element, the downstream PI or derivative action controller, the room thermostats provide a constant room temperature in combination with actuators. The switching operation is realized by a noiseless Triac element. Control is by means of the actuator acting on the valve according to the OPEN / CLOSED principle. The PI or derivative action controller integrated into the room thermostat prevents the room temperature from exceeding the desired value set on the room thermostat.

## BUILDING CATEGORIES

For installations in the heating and cooling area:

- Apartment blocks, housing estates, multiple dwelling units
- Residential care facilities, hospitals
- Administration and service buildings
- Hotels and restaurants, industrial kitchens
- School buildings and sports facilities
- Commercial and industrial buildings

## SYSTEM/BASIC DIAGRAM



## NOVASTAT EL | ELECTRONIC ROOM THERMOSTATS



### 1 NOVASTAT EL BASIC

#### Room thermostat for normally closed actuators

230 V room thermostat for controlling NC actuators for underfloor heating and cooling systems. Noiseless switching output (Triac) with direct or indirect connection of actuators. Dial with integral adjustment facility for correction of actual temperature integrated into the dial.

### TECHNICAL DATA

- Order no.: 206.1650.000
- Operating voltage: 230 VAC 50 Hz  $\pm$  10 %
- Operating temperature: 0–50 °C (32–122 °F)
- Adjustment range: 5–30 °C (41–86 °F)
- Switching output: TRIAC 230 VAC, NC max. 75 W
- Type of protection: Protection class II IP 30
- Type of controller: Static derivative action controller
- Differential gap:  $\pm$ 0,5K
- Temperature sensor: NTC 100 K
- Dimensions / color: H80  $\times$  W80  $\times$  D31 mm / RAL 9010
- Version without handwheel (NovaStat EL Public, 230 V + 24 V) on request

### 2 NOVASTAT EL QUATTRO

#### Room thermostat for normally closed and normally open actuators

24 V / 230 V electronic room thermostat for controlling NC / NO actuators for underfloor heating and cooling systems.

Further functions are similar to NovaStat EL Basic.

### TECHNICAL DATA

- Order no.: 206.1651.000
- Operating voltage: 24 VAC / 230 VAC 50 Hz  $\pm$  10 %
- Switching output: TRIAC 24 VAC / 230 VAC, NC, NO max. 75 W
- Further data similar to NovaStat EL Basic

### 3 NOVASTAT EL INWALL

#### Room thermostat for normally closed actuators

Electronic 230 V flush-mounted room thermostat for controlling NC actuators for underfloor heating and cooling systems. Relay switching output with direct or indirect connection of actuators. An external timer switch or an additional floor sensor can be fitted. Mode can be set by mean of jumpers.

### TECHNICAL DATA

- Order no.: 206.1654.000
- Operating voltage: 230 VAC 50 Hz  $\pm$  10 % / 5 VA
- Operating temperature: 0–50 °C (32–122 °F)
- Adjustment range: 5–35 °C (41–86 °F)
- Switching output: Relais 230 VAC / max. 16 A
- Type of protection: IP 21
- Type of controller : Two point control
- Sensor deviation:  $\pm$ 1 K
- Hysteresis: 0.75 °C
- Temperature sensor: NTC 10 K
- Frame dimensions: Standard 65 mm

### 4 NOVASTAT EL DIGITAL

#### Room thermostat for normally closed and normally open actuators

Electronic room thermostat with 230 V digital display for controlling NC / NO actuators for underfloor heating and cooling systems. Noiseless switching output (Triac) with direct or indirect connection of actuators. Mode switch for normal and lowering modes or external timer.

### TECHNICAL DATA

- Order no.: 206.1652.000
- Operating voltage: 230 VAC 50 Hz  $\pm$  10 %
- Operating temperature: 0–50 °C (32–122 °F)
- Adjustment range: 5–37 °C in 0,5 °C steps (41–99 °F)
- Switching output: TRIAC 230 VAC, NC / NO max. 75 W
- Type of protection: Protection class II IP 30
- Type of controller : Static differential action or PL controller, adjustable
- Differential gap:  $\pm$ 0,3 K
- Temperature sensor: NTC 100 K
- Dimensions / color: H80  $\times$  W80  $\times$  D31 mm / RAL 9010

## NOVASTAT EL | ELECTRONIC ROOM THERMOSTATS

### 5 NOVASTAT EL WEEK

#### Room thermostat for normally closed and normally open actuators

Electronic battery operated and programmable room thermostat for controlling NC / NO actuators, for underfloor heating and cooling systems with digital display, floating relay output for direct or indirect connection of 24V / 230V actuators. Mode switch for normal and lowering mode or automatic timed programs. Can be programmed for weekly and daily programs and for vacations, frost protection and keyboard lock function. Battery supply to avoid data loss in the event of power failure. Battery charge state shown on the display.

#### TECHNICAL DATA

- Order no.: 206.1653.000
- Operating voltage: 3 × LR6 AA 1,5 V batteries
- Operating temperature: 0–50 °C (32–122 °F)
- Adjustment range: 5–35 °C (41–95 °F) frost protection 0,5–10 °C (33–50 °F)
- Switching output: Relais floating, NC / NO max. 8 A
- Type of protection: Protection class II IP 30
- Type of controller: PI controller
- Adjustment bandwidth: 2 °K of proportional band
- Adjustment speed: 7,5 cycles / hour (8 min cycle)
- Temperature sensor: NTC 100 K
- Dimensions / color: H 86 × B 125 × T 32 mm / RAL 9010

## NOVAMASTER EL | ELECTRONIC CONNECTOR MODULES



### 1 NOVAMASTER EL BASIC

#### Wiring module for connecting electrothermal actuators and room thermostats with terminals marked by symbols

Modular design enables expansion by SlaveBox to provide for further connections. Direct wall mounting or mounting on DIN rail. Control of 24V actuators by means of optional transformer. Operating status output shown by LEDs

#### TECHNICAL DATA

- Order no.: 258.9310.000
- Operating voltage: 230 VAC 50 Hz ± 10 % / 24 VAC with transformer
- Operating temperature: 0–50 °C (32–122 °F)
- Number of zones: 6 (max. 4 drives / zones)
- Max. number of drives: 24 × 230 VAC or 18 × 24 VAC
- Number of drives / zones: Max. 4 drives / zones
- Time control line: None
- Type of protection: Protection class II IP 30
- Dimensions / color: H88 × B225 × T58 mm / RAL 9010

### 2 NOVAMASTER EL LOGIC

#### Wiring module for connecting electroterminal actuators and room thermostats with terminals marked by symbols.

Modular design enables expansion by NovaMaster EL Timer to provide for further control functions. Switching output for time control of room thermostat.

Two floating switching outputs as a control contact for pump logic. Direct wall mounting or mounting on DIN rail. Operating status indicated by LEDs.

#### TECHNICAL DATA

- Order no.: 258.9311.000
- Operating voltage: 230 VAC 50 Hz ± 10 %
- Operating temperature: 0–50 °C (32–122 °F)
- Number of zones: 6 (max. 4 drives / zones)
- Max. number of drives: 24 × 230 VAC
- Time control line: Zones A and B present
- Switching output: 2 x relays, floating, max. 8 A
- Type of protection: Protection class II IP 30
- Dimensions / color: H88 × B225 × T58 mm / RAL 9010

### 3 NOVAMASTER EL SLAVEBOX

**An expansion module for wiring electrothermal actuators and room thermostats with terminals marked by symbols**

Plug-in expansion to NovaMaster EL Basic for further connection possibilities. Direct wall mounting or mounting on DIN rail. Control of 24V actuators by means of optional transformer. Operating status indicated by LEDs.

#### TECHNICAL DATA

- Order no.: 258.9313.000
- Operating voltage: 24VAC with transformer / 230 VAC 50 Hz ± 10 %
- Operating temperature: 0–50 °C (32–122 °F)
- Number of zones: 4 (max. 4 drives / zones)
- Max. number of drives:  $\Sigma$  NovaMaster EL Basic + SlaveBox = 24 × 230 VAC oder 18 × 24 VAC
- Time control line: None
- Type of protection: Protection class II IP 30
- Dimensions / color: H88 × W160 × D58 mm / RAL 9010

### 4 NOVAMASTER EL TIMER

**NovaMaster EL Timer expansion module for connection to NovaMaster EL Logic**

Programmable timer function for two time group A and B. Integrated application program of which nine are fixed and two are user programmable. Intelligent processor. Digital display for program, time and function display. Direct wall mounting or mounting on DIN rail.

#### TECHNICAL DATA

- Order no.: 258.9315.000
- Operating voltage: 230 VAC 50 Hz ± 10 %
- Operating temperature: 0–50 °C (32–122 °F)
- Number of zones: 12 Zones, controllable
- Time control line: Zones A and B present
- Operating modes: Automatic; convenience; lowering
- Keyboard lock: Present
- Type of protection: Protection class II IP 30
- Dimensions / color: H88 × W160 × D62 mm / RAL 9010

### 5 TRANSFORMATOR

**Transformer for connection to NovaMaster EL Basic or SB**

Enables 24V actuators to be connected to the respective terminal module.

#### TECHNICAL DATA

- Order no.: 258.9316.500
- Operating voltage: 230 VAC 50 Hz ± 10%
- Operating temperature: 0–50 °C (32–122 °F)
- Output voltage: 24VAC max. 60 W
- Type of protection: Protection class II IP 30
- Dimensions / color: H83 × W110 × D61 mm / RAL 9010