



The electronic thermostats series ET may be applied as a part of the regulation systems to failure monitoring. The output signal of these switches depends on the instantaneous value of the magnitude measured and on the comparative value, which was preset on the switch. Resulting from this, switching-over of the relay galvanic separated contacts takes place, when the value preset is achieved. The relay is switch - over until to unblocking to push button "RESET". The thermostat can be unblocking as well , when the power supply is interrupt. The main parts of the switch are as follows: a temperature switch, an electronic comparator with an adjustable element, and an output relay with switch-over contacts for the voltage of 250 VAC and for the loading current of 8 A. The setting element in the basic version ET1x/... is a potentiometer with a control arrow. The version ET2x/... lacks the control arrow; for setting the comparative value use a screw-driver, rotating the potentiometer shaft. In the version ET3x/..., the comparative values have been fixed by setting in the manufacturer's plant. From the supply voltage viewpoint, the switches are manufactured in individual versions for 230 V/50 Hz, for 24V/50Hz or for 24 VDC.

Execution / Power supply	230V/50Hz	24V/50Hz	24VDC
Outdoor Air	ET11(21,31)/230	ET11(21,31)/24AC	ET11(21,31)/24DC
Duct Probe	ET12(22,32)/230-L1	ET12(22,32)/24AC-L1	ET12(22,32)/24DC-L1
Well Insertion Probe	ET13(23,33)/230-L2	ET13(23,33)/24AC-L2	ET13(23,33)/24DC-L2
Strap-Mount	ET14(24,34)/230	ET14(24,34)/24AC	ET14(24,34)/24DC
With Quick Response	ET16(26,36)/230-L3	ET16(26,36)/230-L3	ET16(26,36)/230-L3
With Cable Sensor	ET18(28,38)/230-Z	ET18(28,38)/24AC-Z	ET18(28,38)/24DC-Z

Remark:

L1 - stem length in mm
 L2 - thermowell length in mm
 L3 - stem length of the switch with quick response
 Z – denotes the cable length in m for the switch SK2L

Standard lengths for the stems and thermowells:

L1: 120 180 240 300 360 420
 L2: 100 160 220 280 340 400
 L3: 100 160

ET1x/... standard execution with temperature scale and with a potentiometer with a control arrow
 ET2x/... a variant with a potentiometer lacking the control arrow - (setting by means of a screw-driver)
 ET3x/... a variant with a fixed adjusted comparative level (within the range of from -25 to 180 °C)

The conventional temperature ranges of the thermostats of ET series include the temperature range -30 to 180 °C. Subject of an optional order, thermostats for the range of up to 300 °C may be delivered.

Basic technical parameters

Standard temperature ranges	- 25 to 15°C	10 to 34°C
	0 to 40°C	40 to 80°C
	20 to 60°C	40 to 120°C
	0 to 80°C	80 to 120°C
	60 to 140°C	80 to 160°C
Supply voltage	230V/50Hz	0,5 VA
	24V/50Hz ± 10%	0,5 VA
	24V DC ± 20%	0,5 W
Maximum switched voltage	250 V AC	
Maximum switched current	8 A switch-over contacts	
Hysteresis	Approx. 1°C	
Degree of protection ES 1x/...	IP 54	
Degree of protection ES 2x/...	IP 54	
Degree of protection ES 3x/...	IP 65	
Ambient temperature - operational	- 25 to 60 °C	
Ambient temperature - storage	- 25 to 80 °C	
Relative humidity	< 70 %	
Connection	Terminal plate COB5, wire cross section 2,5 mm ² maximum Outer diameter of cable from 4 to 8 mm	

Mounting and putting into operation

Mounting procedure:

- 1) Unscrew and remove the face cover with the scale.
- 2) Using two wood screws, fasten the lower part through the fastening holes into the position required.
In case of the switch ET14, fasten the switch to the pipeline using a mounting band and a clip.
In case of the switch ET12, the central holder may be applied for fastening the thermostat, the holder being a part of the delivery.
- 3) Connect the lead-in cables into the terminal plate in compliance with the diagram.
- 4) Insert the connector with the PNL wire into the corresponding connector on the switch board.
In case of the switch ET14, connect also the connector with the sensor outputs.
- 5) Switching the change-over switch, select the mode "heating" or "cooling".
- 6) Screw in the face cover to its original place.

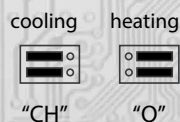
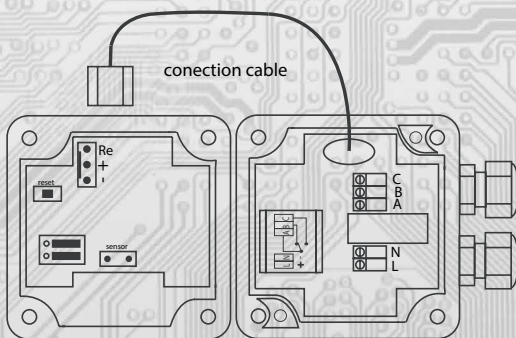
Method of ordering

State the quantity of pieces and the switch type in the order.

Example of an order:

5 pieces of electronic switches ET13/230-100, temperature range 0 to 80 °C, i.e. the switch into pipelines, well length 100 mm, supply voltage 230V/50Hz, execution with a setting arrow

Wiring diagram



The relay contacts are illustrated in the still-stand position, which corresponds to the supply voltage switching off.

Mode "Heating": Change-over switch in position "O"
As long as the temperature measured is lower than the temperature required, the contacts "A" and "C" are turned on. Green LED is ON.

Mode "Cooling": Change-over switch in position "CH"
As long as the temperature measured is higher than the temperature required, the contacts "A" and "C" are turned on. Green LED is ON.

After beyond the limits, the red LED is ON. The relay is switch-over until to unblocking to push button "RESET". The thermostat can be unblocking as well, when the power supply is interrupt.

Dimensions and accessories

