



The electronic switches series ESH10 are designed for application on the DIN bar in regulation systems, where they have the function of thermostats or of other double-state regulators. The output signal of these switches (turned on or turned off) depends on the instantaneous value of the magnitude measured and on the comparative value, which is preset on the switch. Following this intent, switching over of galvanic separated relay contacts takes place as soon as the preset value is achieved. The main parts of the switch is an electronic comparator with an adjustable element, a module of continuous hysteresis setting, and an output relay with switch-over contacts for the voltage of 250 VAC and the loading current 8 A. The switches are provided with a mode switch-over heating - cooling, which makes it possible to make changes in the output contacts characteristics; thus, these electronic switches are predestined for the control of cooling aggregates and ventilating devices, as well as for two-state regulation of heating systems. From the supply voltage viewpoint, the switches are manufactured in individual versions for 230V/50Hz, for 24V/50Hz or 24 VDC.

| Input / supplying | 230V/50Hz | 24V/50Hz | 24V DC |
|-------------------|------------|-------------|-------------|
| Ni1000/5000 ppm | ESH10L/230 | ESH10L/24AC | ESH10L/24DC |
| Ni1000/6180 ppm | ESH10S/230 | ESH10S/24AC | ESH10S/24DC |
| Pt100 | ESH10P/230 | ESH10P/24AC | ESH10P/24DC |
| 4 to 20 mA | ESH10I/230 | ESH10I/24AC | ESH10I/24DC |
| 0 to 10 V | ESH10U/230 | ESH10U/24AC | ESH10U/24DC |

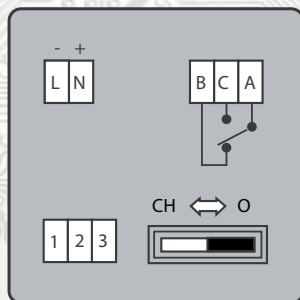
Basic technical parameters

| | | |
|------------------------------------|--|----------------|
| 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 |
| Input ranges (outside temperature) | To be selected by the customer | |
| Supply voltage | ESHxx/230 | 230V/50Hz |
| | ESHxx/24AC | 24V/50Hz ± 10% |
| | ESHxx/24DC | 24V DC ± 20% |
| Maximum switched voltage | 250 V AC | |
| Maximum switched current | 8 A switch-over contacts | |
| Hysteresis | Adjustable within the range from 1 to 5°C | |
| Degree of protection | IP 40 | |
| Bus bar protection | IP 20 | |
| Ambient temperature - operational | - 25 to 60°C | |
| Ambient temperature - storage | - 25 to 80°C | |
| Relative humidity | < 70% | |
| Connection | Bus bar COB5, conductor cross section 2,5 mm ² maximum Cable outer diameter from 4 to 8 mm | |

Mounting and putting into operation

Using the holder, fasten the switch to the DIN bar. Connect the input signal to the terminals 1 and 2, eventually 3, connect the supply voltage to the terminals L and N (eventually + and - for the supplying 24 V DC). The output signal of the control relay is brought out on the terminals A, B, C. Lead-in cables of cross section from 0,35 to 2 mm² are recommended for the connection.

Dimensions and accessories



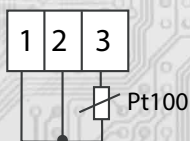
„Heating“



„Cooling“



Connection Pt100



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

The mode „Heating“: - Switch-over in position O

When the value measured is lower than the value required, the contacts A, C are switched on.

The mode „Cooling“: - Switch-over in position CH

When the value measured is higher than the value required, the contacts A, C are switched on.

1 - terminal for connection of Pt100 in three-wire connection

2 - terminal GND

3 - terminal IN

Temperature transducers in two-wire execution or voltage or current inputs are connected to the terminals 2 and 3.

The terminals L and N or + and - are designed for connecting the supply voltage.

Method of ordering

State the type and the quantity of switches in your order, for instance:
5 pieces of electronic switches ESH10L/230, temperature range 0 to 80°C

Dimensional diagram

