

ROOM CONTROLLER HLS 33

HLS 33 is designed for two or three stage room control applications. The controller has one stage for heating and two stages for cooling.

The temperature is measured with internal (or external) NTC 10 sensor. The controller controls the heating (indicator light is red) or cooling (indicator light is green) actuators according to the measured temperature and the set point. The dead zone (indicator light is off) between heating and cooling stages is adjustable (0...3 °C). The controller function (outputs) can be changed reverse.

The actuators can be 0...10 V controlled motors and either 3-point or thermal actuators. The thermal output signal is time proportional and uses 20 second (PWM) pulses.

One cooling stage is controlled with 0...10 V signal and the other stage is controlled either with 3-point or thermal actuator control.

The cooling can be prevented by connecting Z1=Go with an external switch.

Normally, the current temperature is shown on the display. When changing the set point, the set point value is shown on the display for two seconds.

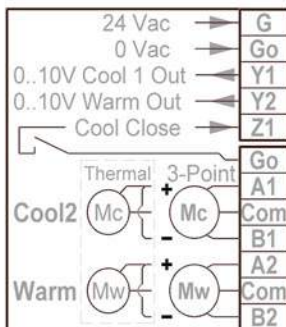
Controller can be used in dry surroundings mounted on the wall surface or on the standard flush mounting boxes (60 mm hole distance).

NOTE: The jumper settings must only be changed when the controller is disconnected from the power supply.

Codings

S1	Cooling	Dir	<input type="checkbox"/>
	Output	Rev	<input type="checkbox"/>
S2	Warming	Dir	<input type="checkbox"/>
	Output	Rev	<input type="checkbox"/>
S3	P / PI	PI	<input type="checkbox"/>
	Control	P	<input type="checkbox"/>
S4	Actuator	3-Point	<input type="checkbox"/>
	Mc, Mw	Thermal	<input type="checkbox"/>
S5	Cooling	1-stage	<input type="checkbox"/>
	function	2-stage	<input type="checkbox"/>
S6	2-stage	Cool1 first	<input type="checkbox"/>
	Cooling	Cool2 first	<input type="checkbox"/>

Wiring



The external NTC 10 sensor of the EXT models is connected to the terminals below the potentiometer.



Technical data

Supply	24 Vac (20...26 V) / 2 VA
Set point	18...26 °C, *21 °C, ±3 °C
Accuracy	±0.5 °C
Dead zone	Dz 0...3 °C, *1,5 °C
Proportional band	Xp 1...8 °C, *4 °C
Integration time	Tn 50...500 s, *300 s
3-point control actuator running time Mt	30...300 s, *180 s
Outputs Y1 and Y2	0...10 V / 10...0 V, 2 mA
Outputs A1 and A2	3-point motor, 24 Vac 1 A thermal actuator, 24 Vac 1 A
Allowed ambient humidity	0...85 % RH (non cond.)
Wiring terminals	1,5 mm ²
Housing	ABS plastic, IP20 * = Factory setting

Ordering guide:

Model	Product number	Description
HLS 33	1150090	room temperature controller; internal sensor
HLS 33-N	1150091	room temperature controller with display; internal sensor
HLS 33-EXT	1150092	room temperature controller; terminals for external NTC 10 sensor
HLS 33-EXT-N	1150093	room temperature controller with display; terminals for external NTC 10 sensor