ZONE TEMPERATURE CONTROLLER HLS 21

HLS 21 is made for individual room and zone temperature control applications. This controller supports thermal actuators for heating and cooling by using 20 s pulse width modulation.

Temperature is detected by the internal (or external) NTC 10 sensor. The space temperature is maintained at the set point by modulating the position of the actuator to meet the cooling (green light) or heating (red light) demand.
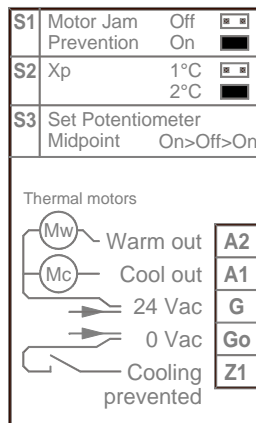
HLS 21-N has a display for the room temperature. When any of the settings will be adjusted, the display automatically switches to display that value, but returns to the normal operation after 2 seconds delay.

The dead zone (no red or green light) between heating and cooling is adjustable (0…3°C).
The cooling mode can be disabled by connecting Z1=Go by using the external switch.
The middle point of the set point potentiometer can me changed by turning the potentiometer to the desired position and by opening and closing the jumper S3.
The P-band of the controller can be selected by S2. P-band is 1°C when S2=off and 2°C when S2=on.

Coding and wiring:

S1	Motor Jam Prevention	Off On	
S2	Xp	1°C 2°C	
S3	Set Potentiometer Midpoint	On>Off>On	

Thermal motors

Mw	Warm out	A2
Mc	Cool out	A1
	24 Vac	G
	0 Vac	Go
	Cooling prevented	Z1

Technical data:

Supply	24Vac (20…26V) / 2 VA
Set point	18…24 , +/- 3 °C, *21 °C
Accuracy	+/- 0,5 °C
Dead zone Dz	0…3 °C, *0,2 °C
P-band Xp	1 °C or *2 °C
Outputs A1 and A2	24Vac 1A
Allowed ambient humidity	0...85 % RH (non cond.)
Terminals	1,5 mm²
Housing	ABS-plastics, IP20
	* = factory setting

Wiring:

G	supply 24Vac
Go	0 V
A1	Cooling output
A2	Heating output
Z1	as Z1=Go, cooling is disabled

Ordering guide:

Model	Product number	Description
HLS 21	1150100	temperature controller with an internal sensor
HLS 21-N	1150101	temperature controller with an internal sensor and with display
HLS 21-EXT	1150102	terminals for external NTC 10 sensor
HLS 21-N-EXT	1150103	temperature controller with internal display and with terminals for external NTC 10 sensor

Products fulfill the requirements of directive 2004/108/EY and are in accordance with the standards EN61000-6-3 (Emission) and EN61000-6-2 (Immunity).