

## ZONE TEMPERATURE CONTROLLER HLS 21

HLS 21 is a two stage controller for individual room and zone temperature control applications. There is one thermic actuator stage for both cooling and heating.

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. The dead zone (no red or green light) between heating and cooling is adjustable (0...3°C).

The controller supports thermal actuators that are controlled by using 20 s pulse width modulation. The cooling mode can be disabled by connecting Z1=Go by using the external switch.

The display normally shows the measured temperature. When the settings are adjusted, the display automatically shows that value for approximately 2 seconds.

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

Coding:

<b>S1</b>	Valve jam prevention	<input type="checkbox"/>	Valve jam prevention on
		<input type="checkbox"/>	Valve jam prevention off
<b>S2</b>	Proportional band (Xp)	<input type="checkbox"/>	2 °C
		<input type="checkbox"/>	1 °C
<b>S3</b>	Centre of user set point area	The user set point area centre (factory setting 21 °C) can be changed by turning the potentiometer to the desired position and then removing and replacing the jumper.	



### Technical data:

Supply	24 Vac (20...26 V) / 2 VA
Set point	18...24 °C, ±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	24 Vac, 1 A
Allowed ambient humidity	0...85 % RH (non cond.)
Terminals	1,5 mm <sup>2</sup>
Housing	ABS-plastics, IP20
	* = factory setting

### Wiring:

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

EXT External NTC 10 temperature sensor (only EXT models)

### 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	temperature controller with display 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).