

HLS 44-3P is a versatile room controller for individual room temperature and VAV control applications. The controller can be connected to any system that supports Modbus RTU protocol by using the RS-485 connection. The bus is galvanically isolated from the controller's other electronics.

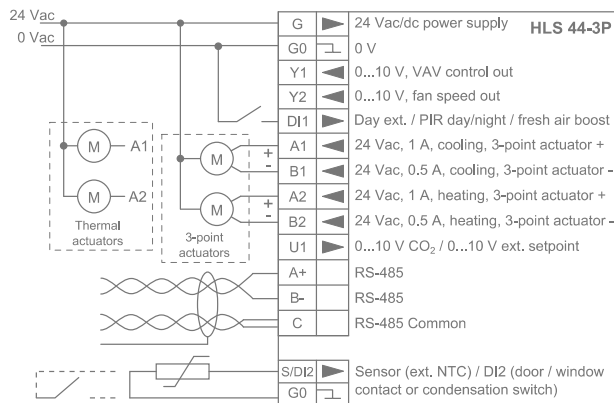
Controller supports 0...10 V controlled actuators and/or thermal actuators or 3-point actuators. The fan coil fan speed can be controlled directly with a 0...10 V output if the fan coil is equipped with EC motor. FCRY 3 relay module is needed for controlling the fan speed of 3-speed fan.

Fresh air supply can be controlled with variable air volume control by using the 0...10 V output. A demand based and energy saving ventilation can be implemented with a separate carbon dioxide measurement connected to the U1 input.

Temperature is detected with an internal or external NTC10 sensor (terminals included). Alternatively the external temperature sensor terminals can be used for connecting door/window contact or condensation switch.

The controller settings can be supplied with controller buttons or by using the HLS 44-3P-SER commissioning tool which speeds up the commissioning.

## Wiring



## Technical data:

Supply	24 Vac/dc** (22...28 V), < 1 VA
Set point	
day mode	18...26 °C, *21 °C, ±3 °C
night mode	Frost protection 8...50 °C, *17 °C
Accuracy (measuring)	±0.5 °C
Dead zone	
day mode	0,2...3 °C, *0,2 °C
night mode	0...10 °C, *6,0 °C
Proportional band	1...32 °C, *1 °C
Integration time	50...5000 s, *300 s
3-point actuator driving time	30...300 s
Outputs	2 x 0...10 V, 2 mA
	2 x triac output 24 Vac 1 A for thermal actuators or 3-point actuators
Communication	Modbus RTU
Ambient temperature	0...50 °C
Ambient humidity	0...85 % RH (non-condensing)
Wiring terminals	1.5 mm <sup>2</sup> , tilted
Housing	IP20, ABS plastic
Mounting	on the wall or on the standard flush mounting box (60 mm hole distance)
Dimensions (w x h x d)	87 x 86 x 30 mm

\* factory settings

\*\* **NOTE:** Only the 0...10 V outputs and Modbus work when using DC supply voltage.

## Ordering guide:

Model	Product number	Description
HLS 44-3P	1150280	fan coil and VAV controller; Modbus communication
HLS 44-3P-SER	1150281	commissioning tool for HLS 44-3P

**NOTE:** The controller is available also with various button configurations.

All specifications are subject to change without notice



# TECHMARK

— Industriesteuerungen GmbH — <http://www.techmark.de> — e-mail: [info@techmark.de](mailto:info@techmark.de) —

Kirschstrasse 20 • D-80999 München • Telefon (+49-89) 89.26.57-0 • Telefax (+49-89) 89.26.57-33