LUNA RC

Digital room controller for air and waterborne indoor climate systems

QUICK FACTS

- Versatile room controller for temperature control of air, heating and cooling
- Available in two variants:
  - LUNA RC TEMP-MB in standard version
  - LUNA RC CO_2-TEMP-MB with built-in CO_2 sensor
- Built-in temperature sensor and the possibility to connect an external temperature sensor
- Built-in communication port for connection to a communication bus (Modbus RTU over RS485), for reading values from a computer
- Inputs for condensation sensor or occupancy sensor
- Four outputs to control heating and cooling actuators
- Three different operating modes (day, night and economy)

Swegon

Technical description

Version

LUNA RC is available in two variants:
- LUNA RC TEMP-MB in standard version
- LUNA RC CO_2-TEMP-MB with built-in CO_2 sensor

LUNA RC is a versatile room controller for the temperature in individual rooms and for control applications in respect of variable air volume (VAV). Using the RS-485 connector, it is possible to connect the controller to all the systems that support the Modbus RTU protocol.

The Bus unit is galvanically isolated from the controller's other electronics.

The controller supports 0...10 V regulated actuators and/or thermal actuators and 0…10 V regulated dampers. It is possible to regulate the fan coil's fan speed using a 0…10 V output if the fan coil has an EC motor.

A 0…10 V output has been reserved for variable control of air volume. It is possible to perform energy-saving ventilation on request with separate carbon dioxide measurement that is linked to the U1 input.

The temperature is detected with an internal or external NTC10 sensor (the terminals are included). Alternatively, the external temperature sensor can be used to connect a door/window contact or condensing switch.

Figure 1. LUNA RC TEMP-MB and LUNA RC CO_2-TEMP-MB

Operating modes

The controller has operating modes for day and night. The operating modes are regulated with the aid of an external card switch, PIR occupancy detector, over Modbus and from a menu. It is possible to temporarily enable day mode for a specific time by pressing the "Occupancy" button. The temporary time can range from 1...480 min. After the delay, the controller reverts to night mode if day mode has not been enabled simultaneously over Modbus.

Placement

Mount the product on a wall or in a junction box (with 60 mm distance between the holes).

Material and surface treatment

The product is made of ABS plastic.

Function

LUNA RC provides a stable and comfortable room temperature. The air, heating and cooling actuators are accurately and efficiently controlled and regulated by reading the room temperature with the built-in or external temperature sensor.

Maintenance

If necessary, use a dry cloth when cleaning. Never use water, detergent, cleaning solvent or a vacuum cleaner.

Environment

The Building Material Declaration is available for downloading at www.swegon.com.

Accessories

Accessory for temperature control

- External resistive sensor (type NTC, 10 kOhm at 25°C)

Accessory to detect/avoid condensation

- Condensation sensor where the relay is activated when the dew point temperature drops below the setpoint value

Accessory to detect presens

- Presence detector of IR type, i.e. a heatsensing detector that quickly reacts to human presence in the room.

Technical data

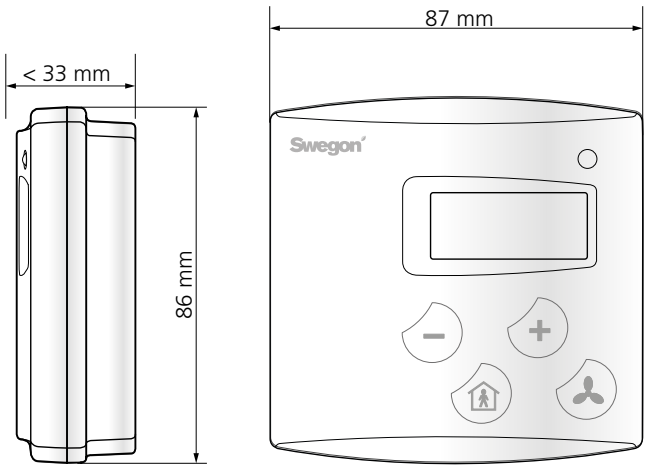

Figure 2. Dimensional drawing - LUNA RC TEMP-MB and LUNA RC CO_2-TEMP-MB

Technical data

Designation:	LUNA RC TEMP-MB: standard version	
	LUNA RC CO_2-TEMP-MB: Version with built-in CO_2 sensor	
Power supply:	24 VAC/DC** (20…28 V) < 1 VA	
Set point:	day mode	18…26°C, *21°C, ±3°C
	night mode	Frost protection 8…50°C, *17°C
Precision (measurement error):	±0.5°C	
Dead band:	Dz	in day mode 0.2…3°C, *0.2°C
		in night mode 0…10°C, *6.0°C
Proportional band:	Xp	1…32°C, *1°C
Integration time:	Tn	50…5000 s, *300 s
Output:	4 x 0…10 V, 2 mA	
	2 x TRIAC output 24 VAC 1A for thermal actuators	
Permitted room humidity:	0…85% RH (non-condensing)	
Conductive terminals:	1.5 mm^2	
IP class:	IP20	
Casing:	ABS plastic	
Dimensions:	(wxhxd) 87x86x33 mm	

* Factory setting

** Note: When using supply voltage with direct current, only capacities 0…10 V work.

Specification

Product

Room controller in standard version	LUNA RC	a	TEMP-MB
Version:			

Room controller with built-in CO_2 sensor	LUNA RC	a	CO2-TEMP-MB
Version:			

Accessories

Temperature sensor Sensor for temperature control External resistive sensor (type NTC, 10 kOhm at 25°C)	LUNA	d	T-TG-2
Version:			

Condensation sensor Sensor where the relay is activated when the dew point temperature drops below the setpoint value	WCD2	a
Version:		

Presens sensor Sensor of IR type, i.e. a heatsensing detector that quickly reacts to human presence in the room	DETECT O	a	-bbbb
Version:			
Type: Wall mounted: V110 Ceiling mounted: T360			

Specification text

Example of a specification text according to VVS AMA.

Swegon's room controller for air and waterborne indoor climate systems

LUNA RC, available in two variants:

- LUNA RC TEMP-MB room controller in standard version
- LUNA RC CO_2-TEMP-MB room controller with built-in CO_2 sensor

LUNA RC TEMP-MB with the following functions:

- Versatile room controller for regulating the temperature in individual rooms and for control applications in respect of variable air volume (VAV)
- Using the RS-485 connector, it is possible to connect the controller to all the systems that support the Modbus RTU protocol
- The Bus unit is galvanically isolated from the controller's other electronics
- The room controller supports 0...10 V regulated actuators and thermal actuators (PWM)

LUNA RC CO_2-TEMP-MB with functions as set out above as well as:

- The controller has a built-in CO_2 sensor

Ordering examples

- Room controller	LUNA RC TEMP-MB	XX items
- Room controller	LUNA RC CO2-TEMP-MB	XX items

Accessories

- External temperature sensor	LUNAd T-TG-2	XX items
- Condensation sensor	WCD2	XX items
- Presens sensor	DETECT O-V110	XX items

Documentation

The following documentation can be downloaded from our website www.swegon.com

LUNA RC Instructions for use

LUNA RC Wiring instructions

LUNA RC Building Materials Declaration

LUNA RC CE Declaration