SALUS VS30W Programmable Wired Thermostat with Digital Display Installation Guide

Contents

SALUS VS30W Programmable Wired Thermostat with Digital Display

Relay module RM-16A opens and closes the circuit in order to affect the work of other devices. Some uses of the module RM-16A with other Salus products are shown below:

1. Connection of the thermostat with the high voltage relay 230V (e.g. VS30/RT200/ERT20/ERT30/ERT50/VS10) with a gas boiler which requires free-voltage output NO/COM or NC/COM
2. Connection of the SALUS temperature regulator with the NO/COM relay (e.g. 091FL) with the boiler con-trol which requires NC/COM output (NC/COM output is normally required in the solid fuel boiler controls)
3. Connection of the receiver transmitting power higher than it is allowed by the relay in a regulator. The maximum electricity consumption of the receiver cannot exeed 16A
4. Connection of the devices other than electro thermal actuators with the wiring centre (KL06-M/KL08NSB /KL08RF/KL10/KL10RF) e.g. if you want to connect a pump or an electric heating mat instead of a electro thermal actuator.

Introduction

The VS30 thermostat controls temperatures of individual heating zone in underfloor heating systems. Thermostat allows for significant savings thanks to the possibility of maximum reduction the set temperature. The full version of the manual in PDF format is available on the website **www.salus-controls.eu**

Product Compliance

This product complies with the following EU Directives: Electromagnetic Compatibility 2014/30/EU, Low Voltage Directive 2014/35/EU and RoHS 2011/65/EU. Full information is available on the website **www.saluslegal.com**

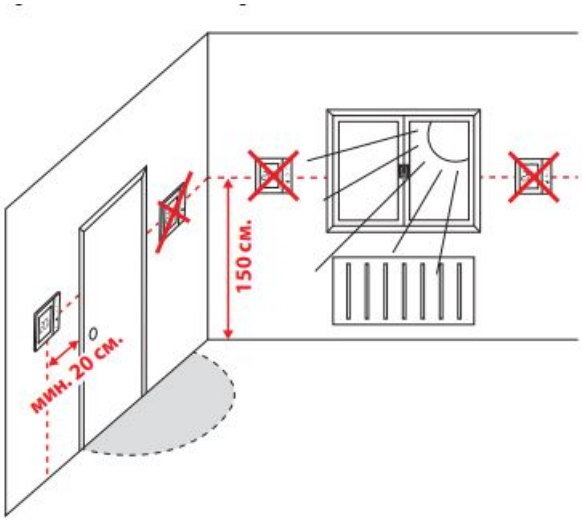
Safety Information

Use in accordance with national and EU regulations. Use the device only as intended, keeping it in a dry condition. The product is for indoor use only. Installation must be carried out by a qualified person in accordance with national and EU regulations.

Terminals description

Terminal	Description
L,N	Power Supply 230 V AC
NSB	Night SetBack (output 230 V AC)
SL	Switched output (230 V AC)
S1, S2	External temperature sensor

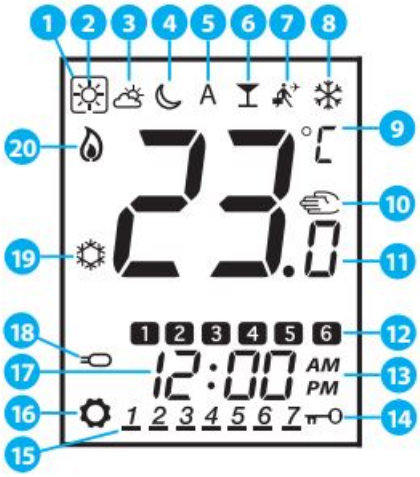
Proper thermostat placement



Button Functions

Button	Function
∧ ∨	Increasing / decreasing temperature or value
〈 〉	Selection of the operating mode, switching between values
✓	Short press - selection confirmation Long press - entry to or exit from the menu
∧ + ∨	Long press causes blocking or unlocking the thermostat
✓ + 〈 + 〉	Long press enters the installer mode

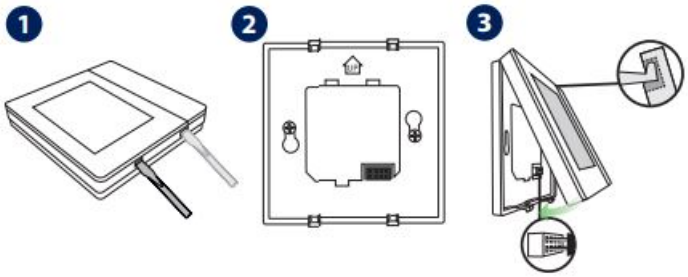
LCD Icon description



1. Current active mode
2. Comfort mode
3. Standard mode
4. Economic mode
5. Automatic mode
6. PARTY mode
7. Holiday mode
8. Frost protection mode
9. Temperature unit
10. Manual mode / temp. override
11. Current / set temperature
12. Program number
13. AM/PM
14. Key lock
15. Day of the week
16. Settings
17. Time
18. Additional temp. sensor
19. Cooling
20. Heating

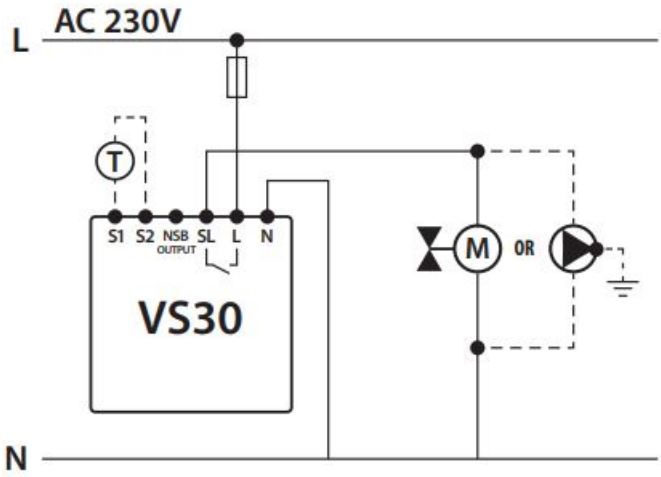
Installation

The VS30 thermostat has been designed for flush mounting in a standard electrical box with a diameter of 60 mm.

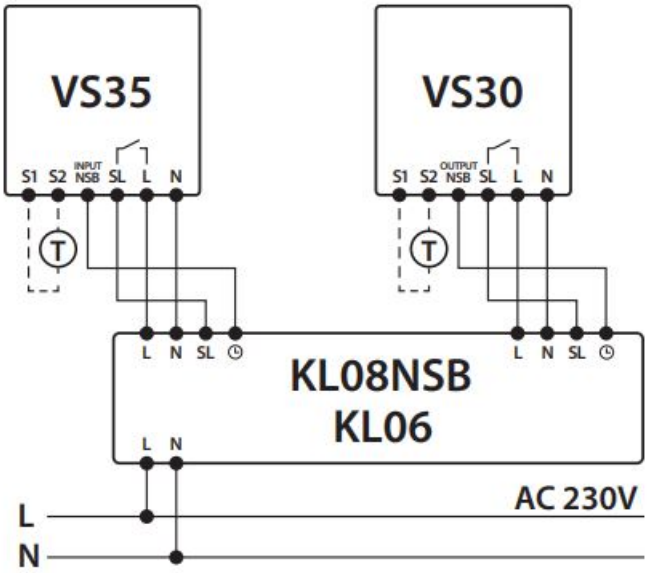


Note: Use the rear plate of the VS30 thermostat only with this model.

Wiring diagrams
An additional temperatur Te sensor is optional.
VS30 thermostat in connection with actuator or pump

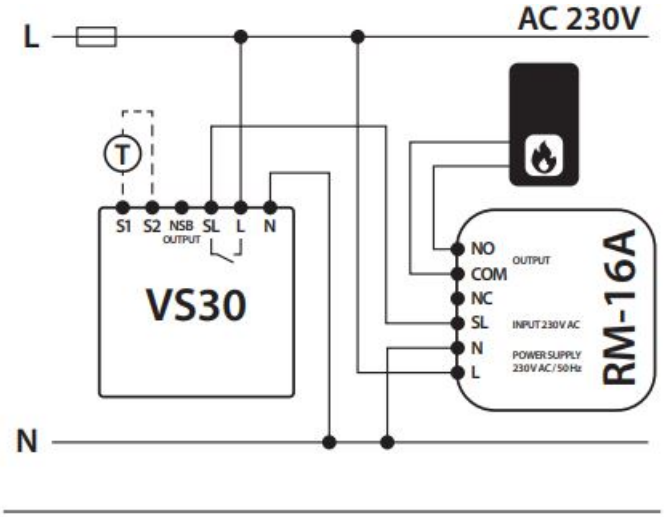


VS30 thermostat in connection with wiring centre
In this diagram, the VS30 thermostat manages the NSB function, more details about NSB function can be found on the next page.



Note: In the KL06 wiring centre, the SL terminal is marked with an arrow icon .

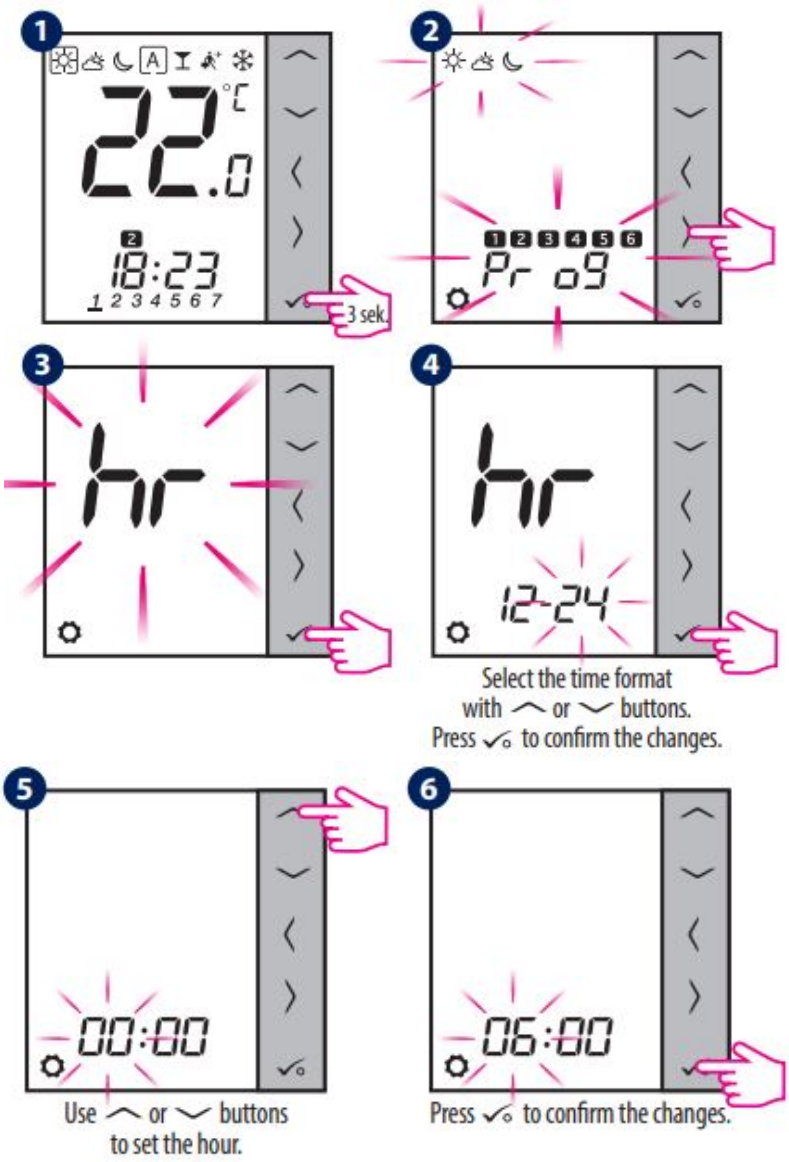
VS30 thermostat in connection with a boiler with a “NO” voltage free terminal through the RM-16A relay
NSB function is not active.



Time and date setting

Note: During the first start-up, thermostat will automatically start time and date setting – in this case go to step 4.

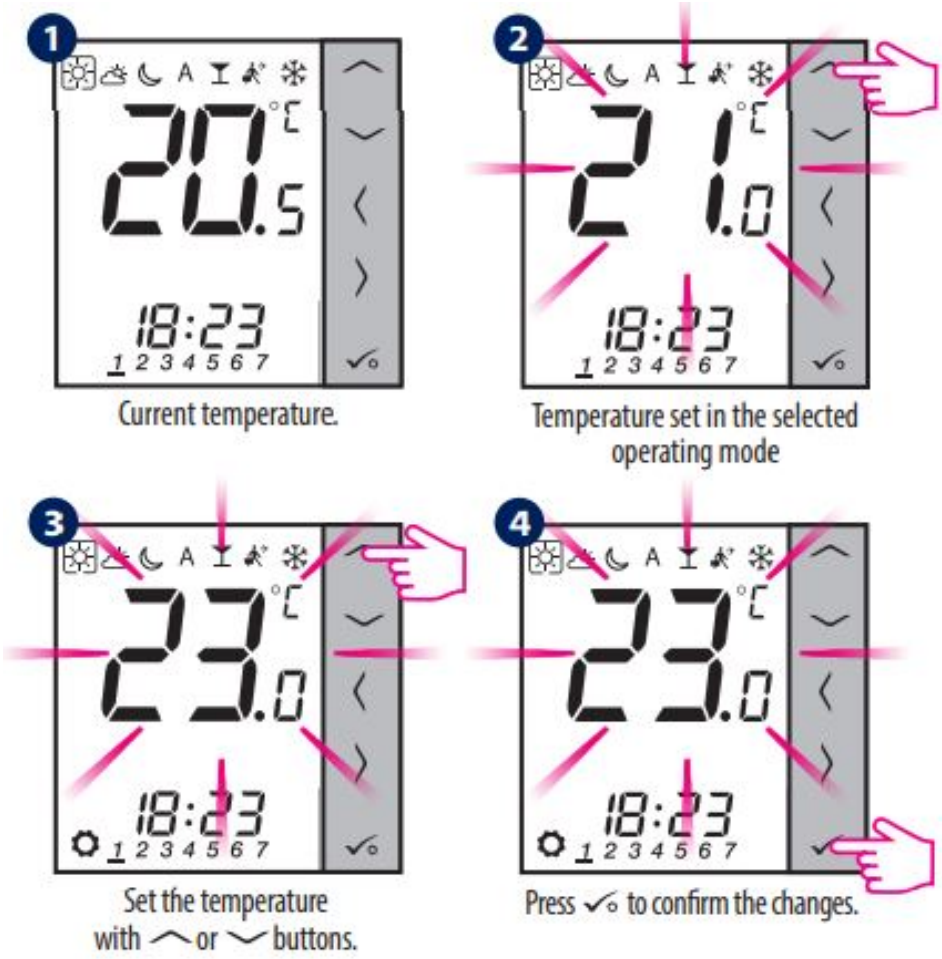
Press any button to highlight the screen, then follow the steps below:



Similarly to steps 5 and 6, set the minutes, year, month and day.

Temperature setting

Press any button to highlight the screen, then follow the steps below:



Manual mode – temperature settings

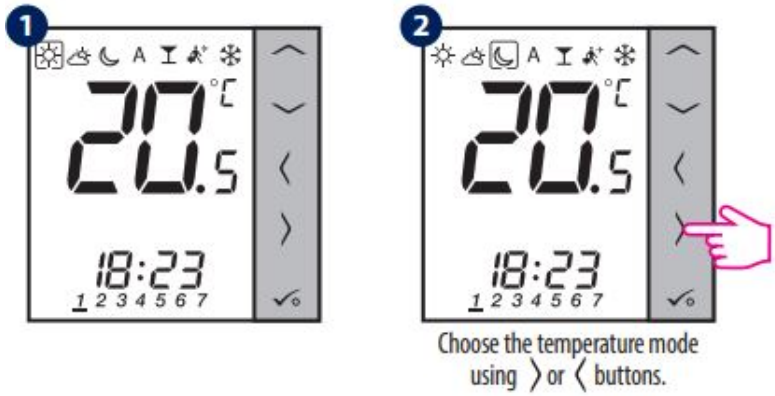
There are 4 temperature levels available. In manual mode only one temperature level is active (icon in the frame indicates which mode is currently chosen). For each temperature levels you can set a different temperature.

- Comfort mode
- Standard mode
- Economic mode (when this mode is selected on the NSB output appears 230 V AC voltage)
- Frost protection mode. Usually used in a longer period of absence or during the holidays (available only in heating mode).

Thermostat also has 2 additional modes:

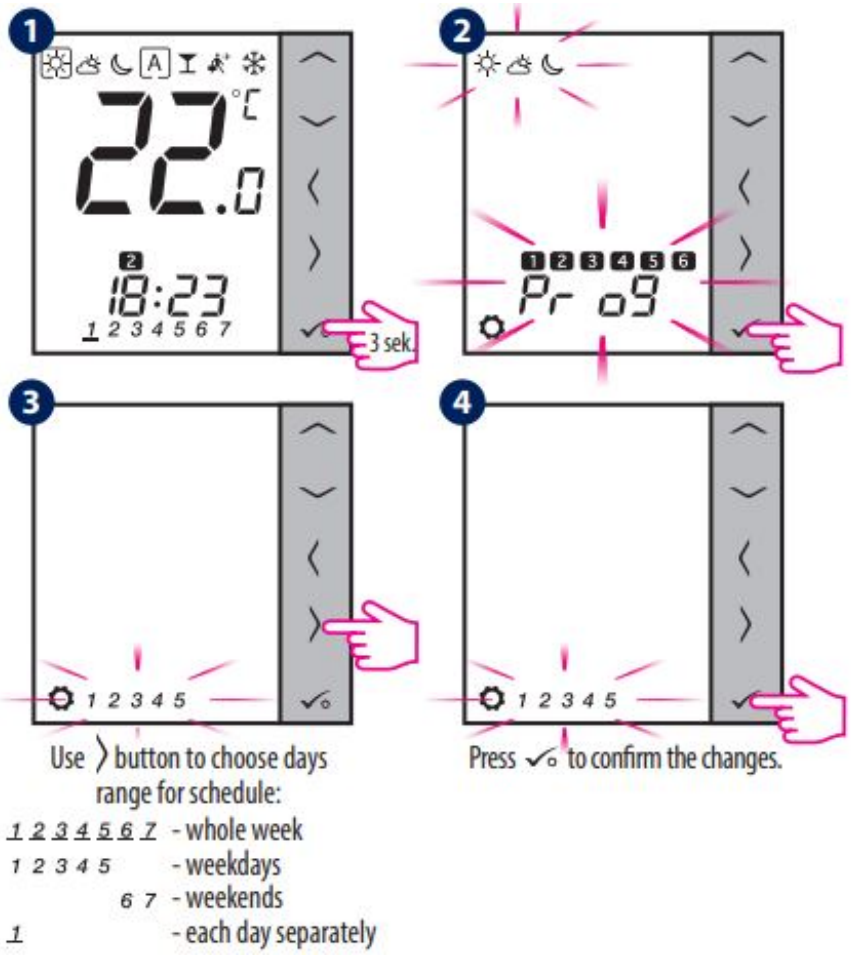
- PARTY mode sets the comfort temperature for a defined time by the user (maximum 9 hours 50 minutes).
- The HOLIDAY mode sets the frost protection temperature for a user defined period of time (maximum 99 days).

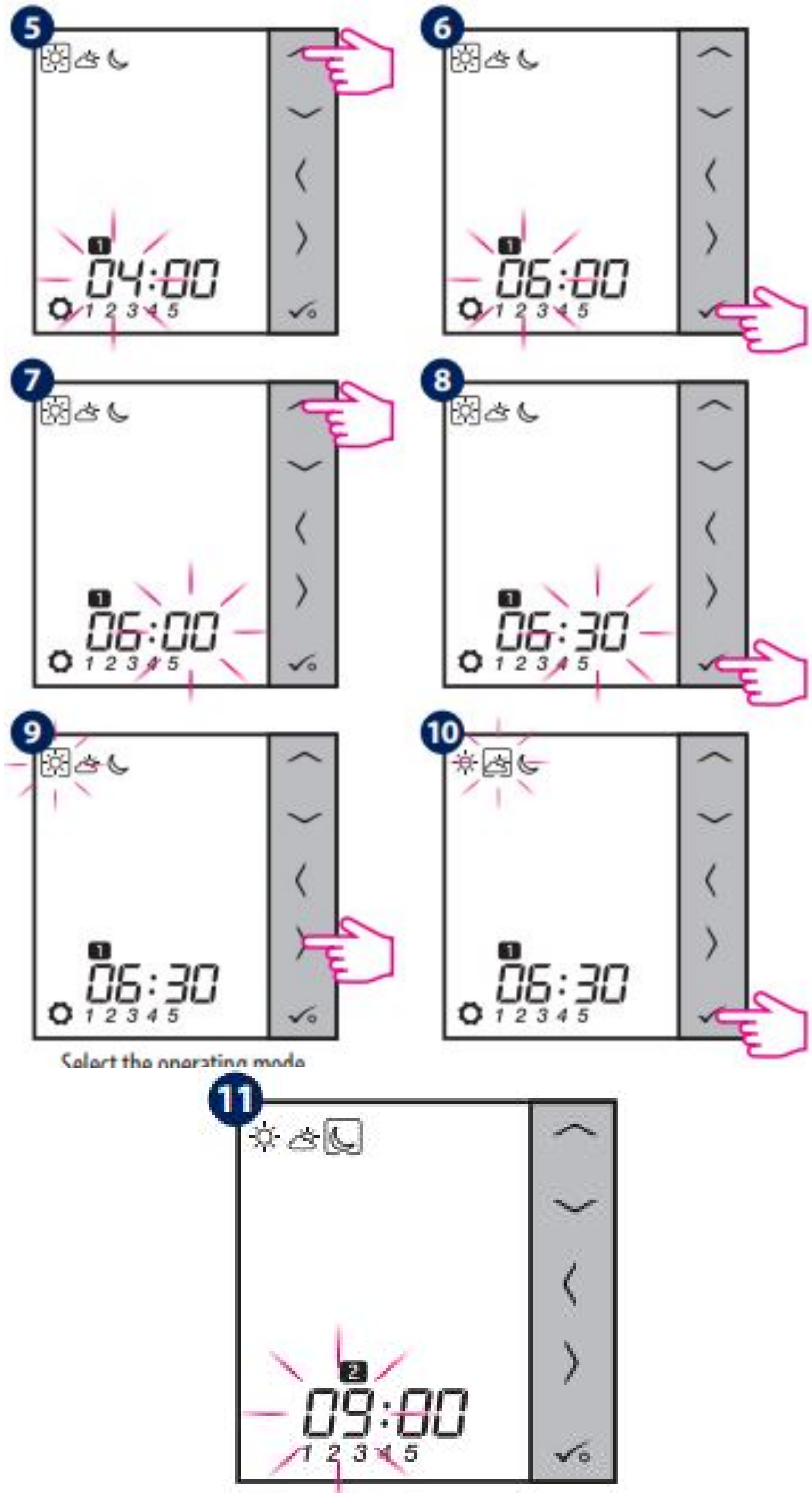
Press any button to highlight the screen, then follow the steps below:



Programming

Press any button to highlight the screen, then follow the steps below:





Repeat steps 5 – 10 to set time and temperatures for next time ranges. No hour (–:–) on the display means whole day
is planned already. Schedule can be divided into maximum 6 time ranges.

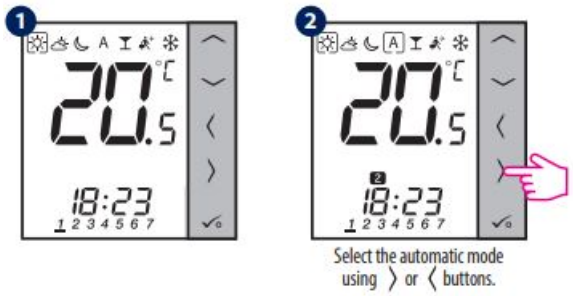
NSB function – automatic mode

The NSB (Night SetBack) function can automatically change temperatures on VS35 daily thermostats via VS30 programmable thermostat connected to a wiring centre (or another external clock). NSB function switches between comfortable temperature and economic temperature .

To activate the automatic mode, select the [A] icon. On display together with the [A] icon, the controller indicates active temperature mode: ☼ or ☾.

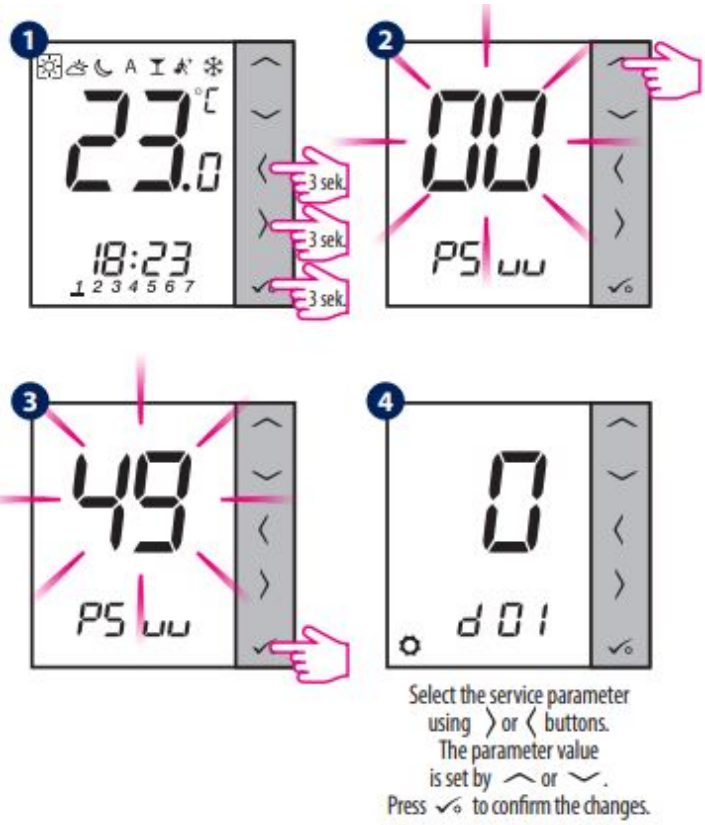
Note: For the NSB function to work, it is necessary to connect the wirings properly. Connection diagrams can be found on the previous page.

Press any button to highlight the screen, then follow the steps below:



Installer settings

Press any button to highlight the screen, then follow the steps below:



Note: To restore the thermostat's factory settings, in step 2 set the PSuu to 47 code, and confirm the selection with the button.

dxx	Function	Value	Description	Default value
d01	Control method temperature	0	PWM algorithm	0
		1	Span ±0.5°C	
		2	Span ±1.0°C	
d02	Offset temperature	from -3.0°C to +3.0°C	If the thermostat indicates wrong temperature, you ca n correct it by ± 3.0°C	0°C
d03	Using a floor tempera- ture sen sor (S1, S2)	0	No sensor	0
		1	Sensor is connected	

d04	External sensor used for air or floor temperature measurement (Function is active, when d03=1)	0	Thermostat measures the temperature only on the external sensor	0
		1	The sensor is used as a protection against overheating the floor	
d05	Cooling mode control method	1	Span ±0.5°C	2
		2	Span ±1.0°C	
d06	Type of thermoelectric actuator	0	NO – normally open	1
		1	NC – normally closed	
d07	Valve protection	0	OFF	1
		1	ON	
d08	Frost protection temperature	5-17°C	Frost protection / Holiday mode temperature	5°C
d09	Clock format	0	12 hour	1
		1	24 hour	
d11	Daylight Saving Time	0	OFF	1
		1	ON	
d12	Heating temperature limit	5-35°C	The maximum heating temperature that can be set by the user	35°C
d13	Cooling temperature limit	5-40°C	The minimum cooling temperature that can be set by the user	5°C
d14	Maximum floor temperature (this function is active in heating mode when d04 = 1)	6-45°C	In order to protect the floor from overheating, heating will be turned OFF, when the maximum temp. of the floor sensor will be reached	27°C
d15	Minimum floor temperature (this function is active in heating mode when d04 = 1)	6-45°C	In order to protect the floor, heating will be turned ON, when the minimum temp. of the floor sensor will be reached	10°C

d16	Lower floor temperature limit for cooling (this function is active when d04 = 1)	6-45°C	In order to protect the floor, cooling will be turned OFF, when the minimum temp. will be reached	6°C
d17	Choice of the default program	1-5	Selection 1 of the 5 default programs	1
d18	Operating mode HEATING / COOLING	0	Heating system	0
		1	Cooling system	

Error codes

Error code	Description
Err02	The maximum / minimum floor temperature has been exceeded
Err03	Temperature sensor is faulty
Err04	Temperature sensor is shorted

SAFETY INFORMATION

Before connecting the relay module with a different device make sure that its parame-ters are consistent with the RM-16A module specification. Incorrect connection may cause undesirable action, excessive overheating and combustion hazard. To avert the hazard make sure that the relay module RM-16A is correctly connected. The connection of the device can be done only by a qualified installer who has up-to-date eligibility.

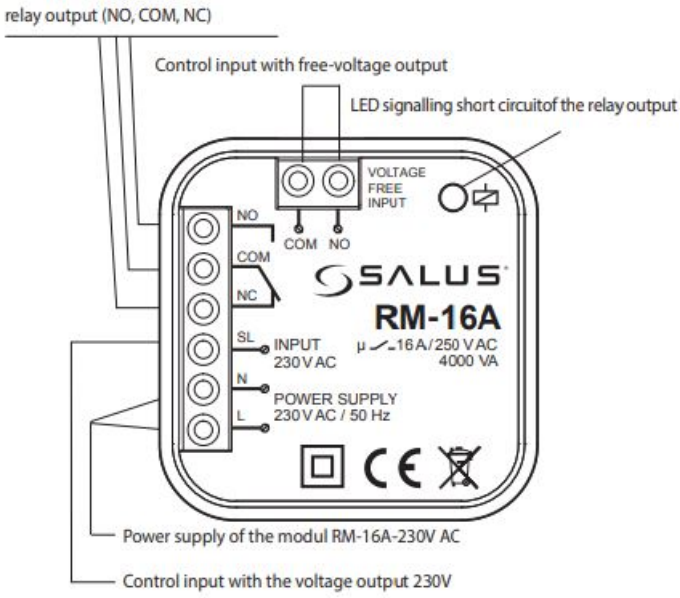
INTRODUCTION

Relay module RM-16A opens and closes the circuit in order to affect the work of other devices. Some uses of the module RM-16A with other Salus products are shown below:

1. Connection of the thermostat with the voltage relay 230V (e.g. VS30/RT200/ERT20/ERT30/ERT50/VS10) with a gas-fired boiler which requires free-voltage output NO/COM or NC/COM
2. Connection of the SALUS thermostat with the NO/COM relay (e.g. 091FL) with the boiler control which needs NC/COM output (NC/COM output is normally required in the solid fuel boiler controls)
3. Connection of the receiver transmitting power higher than it is allowed by the relay in a regulator. The maximum electricity consumption of the receiver cannot exeed 16A
4. Connection of the devices other than electro thermal actuators with the wiring centre (KL06-M/KL08NSB /KL08RF/KL10/KL10RF) e.g. if you want to connect a pump or an electric heating mat instead of a electro thermal actuator.

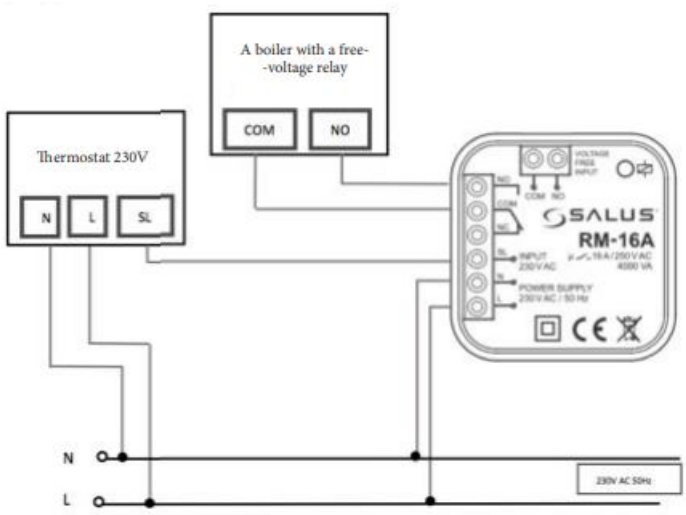
PRODUCT SPECIFICATION	
Power:	16A / 250V AC, 4000VA
INPUT NO/COM:	Connection of a regulator with the free voltage relay N O/COM
OUTPUT NC/COM/NO:	Output receiver
INPUT SL:	Connection of the regulator with the voltage relay 230 V
POWER SUPPLY N/L:	Power of 230V AC/50Hz
Measurements:	47x47x21

VISUAL ASPECT



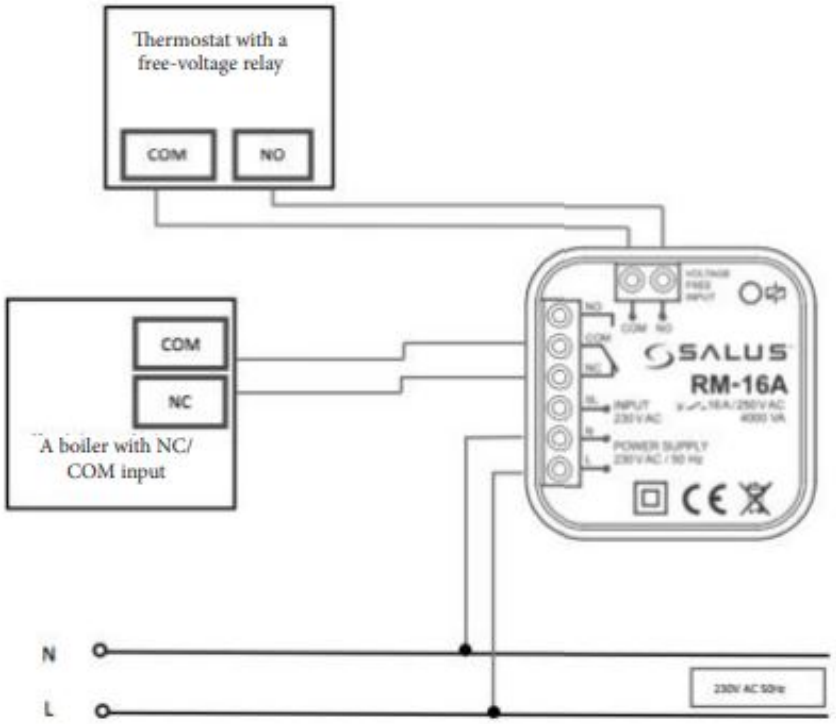
CONNECTION DIAGRAMS

1. Connection of the thermostat with a voltage relay 230V (e.g. VS30/RT200/ERT20/ERT30/ERT50/VS10) to a gas boiler which requires free-voltage output NO/COM.

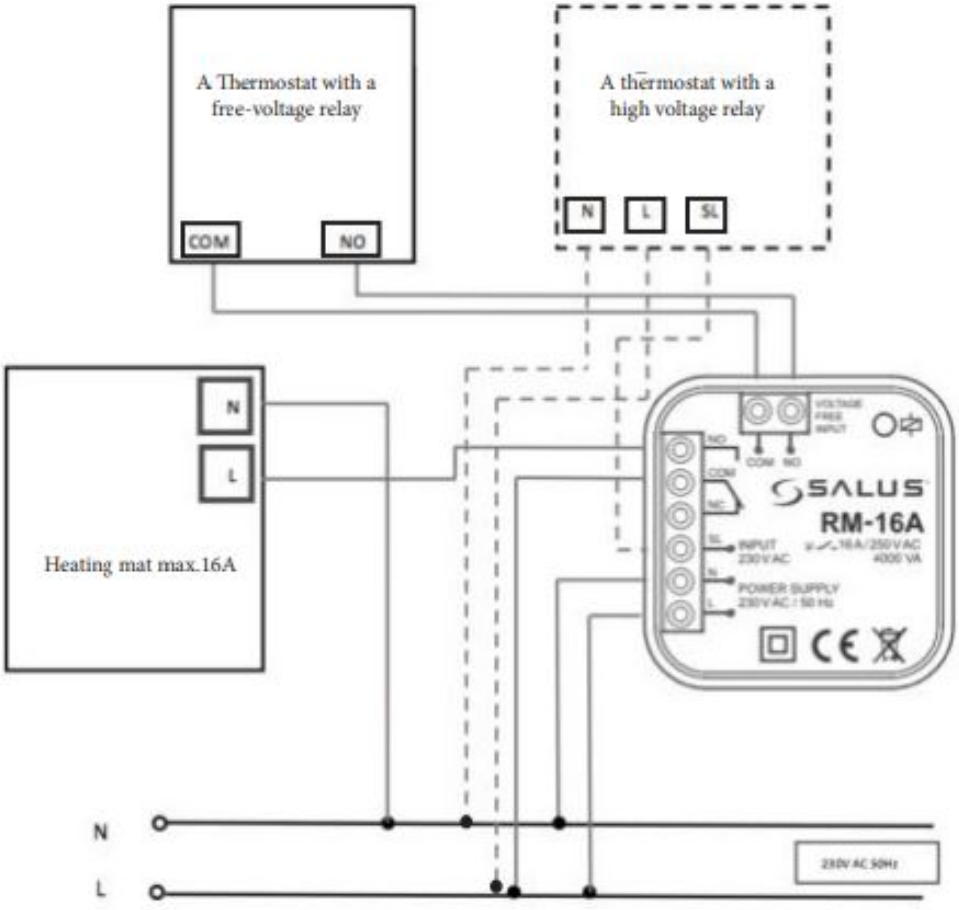


2. Connection of the SALUS temperature regulator with NO/COM relay (e.g. 091FL) with a boiler control which

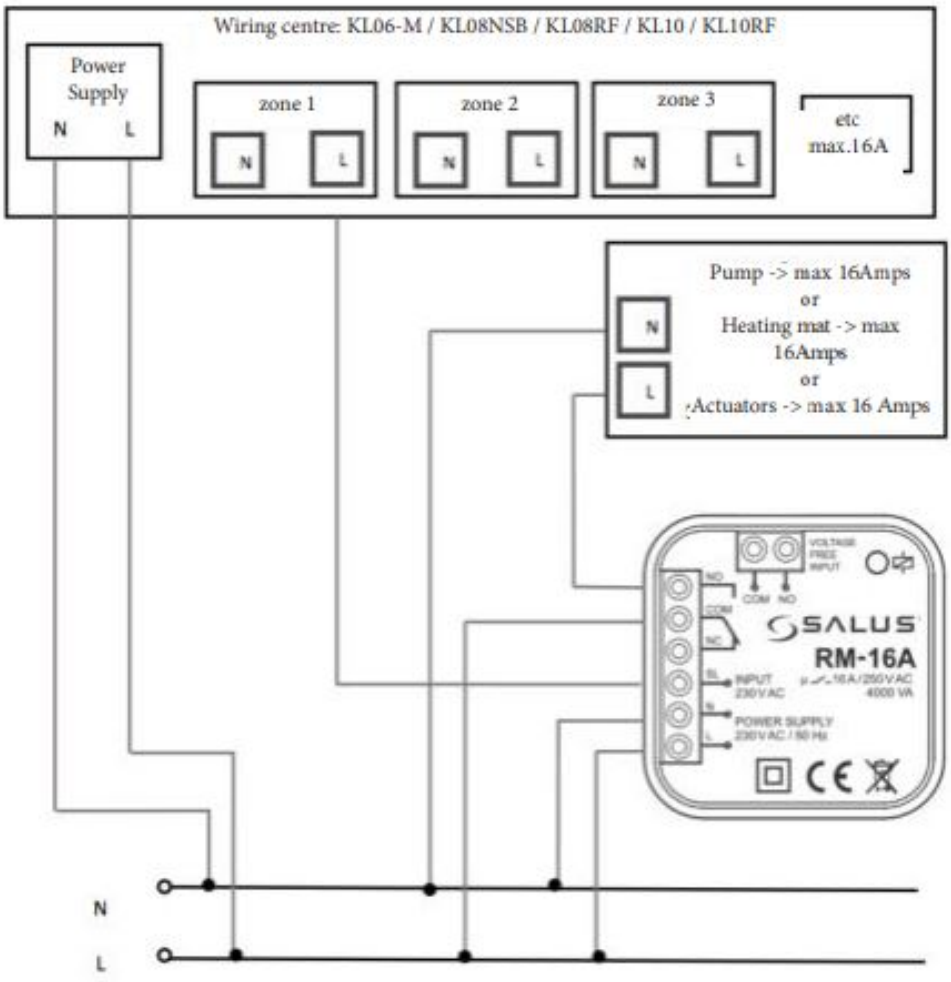
requires NC/COM output (NC/COM output is normally required in solid fuel boilers controls).



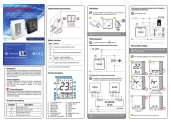
3. Connection of the receiver transmitting power higher than it is allowed by the relay in a regulator. The maximuml electricity consumption of the receiver cannot exeed 16A



4. Connection of the devices other than electro thermal actuators with the wiring centre (KL06-M / KL08NSB / KL08RF / KL10 / KL10RF) e.g. if you want to connect a pump or an electric heating mat instead of a electro thermal actuator.



Documents / Resources

	SALUS VS30W Programmable Wired Thermostat with Digital Display [pdf] Installation Guide VS30B, VS30W, Programmable Wired Thermostat with Digital Display