

ATTENTION

Firmware V3.0.1

Read carefully these instructions before installing and using this device and keep them for future reference. Attention to installation and electrical wiring. Use this device only as described in this document and never use itself as a security device. The device must be disposed of in accordance with local standards for the collection of electrical and electronic equipment.



DESCRIPTION

RH2 has a sensor which reads the humidity (0-100% RH) and the temperature (-40-125°C) of a room. It has 3 indication digits of temperature display with an accuracy of 0.5 °C and 4 buttons. It has two relays: one relay 16A controls the humidity of the room and the other one 10A controls either the humidity or the temperature of the room. Both relays can operate to cooling (dehumidification) or heating (humidity) mode via a parameter adjustment. The device is mounted on a panel hole 29x71mm and it is restrained with plastic side brackets. Through the serial input it can be connected to a network either through Cloud IoT on the CORTEX platform, or through a local computer in the CAMIN program for complete local recording and monitoring of the device.

KEYBOARD INDICATIONS AND FUNCTIONS



Indications	
	relay 1 ON in humidity mode
	relay 1 ON in dehumidification mode
	relay 2 ON in cooling mode
	relay 2 ON in heating mode
%RH	humidity indication
°C	temperature indication
	alarm ON
	malfunction ON

Keyboard	
	enter/exit the parameter's menu
	display the parameter's value enter parameter's value
	up arrow display second indication
	down arrow ON/OFF device (check below)

For more indications regarding the alarms please see the alarm's table at page 3.

ADJUSTING HUMIDITY – SET POINT 1

- Press to display the first parameter **SP1**.
- Press to display its value. With or change **SP1** value.
- Press to save the new value. The device is working with the new adjustment.

INDUSTRIAL FACTORY SETTINGS

- Press to display the first parameter **SP1**. Press 2 times and the parameter **Cod** is displayed.
- Press to display its value and press to enter the value **31**. Press to store the value to parameter **Cod**.
- Press again to exit the parameter menu, 'YES' is displayed on the screen. All appropriate factory settings are now stored in the device.

ON/OFF DEVICE

To activate or deactivate the device, press for 3 seconds .

PROGRAMMING A PARAMETER

ATTENTION: to gain full access to the parameter's menu, the 3rd parameter **Cod** must be adjusted to **22** (see parameter table at next page).

- Press to enter the parameter menu.
- Choose the parameter you want to adjust by pressing or and press to display its value.
- Press or to change its value and then press to store the new value.
- Press to exit the parameter menu.

TECHNICAL SPECIFICATIONS

Model **RH2** power supply: 230VAC 50/60Hz / Maximum power consumption: 3W. Model **RH2W** switching power supply 100-264VAC 50/60Hz 5W

It is recommended using a power supply safety fuse: 0.5A (not included)

Humidity and temperature sensor from 0-100%RH and from -40-125°C with metal tube Ø8mm and length 14cm

Humidity accuracy from 0-90%RH ±2%RH, from 90-95%RH ±2%RH and from 95-100%RH ±3.5%RH

Temperature accuracy from -40-90°C ±0.3°C and from 90°C-125°C can reach till ±0.5°C

Serial input 5 pins connector

Relay 1 humidity 16A res. 250VAC normally open / Relay 2 temperature 250VAC 10A / Max current load 16A

Connections: cable cross section 2.5 mm² for all relays / cable cross section from 0.25 to 1.0 mm² for the sensors

Connections with terminal blocks 18A using cable with cable cross section up to 2.5 mm² / It is recommended using a torque wrench with maximum torque 0.4Nm

Operating temperature: -15÷+55°C / Storage temperature: -20÷+80°C

Dimensions 37x79x81mm / The device is mounted on panel hole 29x71mm and restrained with plastic side brackets / Protection IP65 front

Firmware: V3.0.1

SERIAL INPUT

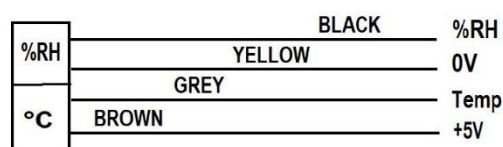
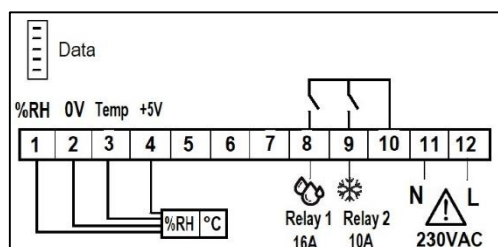
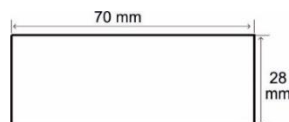
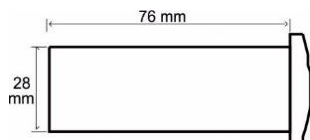
RH2 connects via serial input to the cloud and the CORTEX platform for monitoring - recording and managing the thermostat from your mobile, tablet or any computer.

ELECTRICAL DIAGRAM - DIMENSIONS

ATTENTION: according to safety standards, the device must be properly positioned and protected from any contact with electrical parts. The device must be fastened in such a way that it cannot be removed without the use of tools. Disconnect the main safety switch of the installation before proceeding to any maintenance. Disconnect the power supply of the device before proceeding to any maintenance. Do not place the device near heat sources, equipment containing strong magnets, in areas affected by direct sunlight or rain. Prevent electrostatic discharges and sharp objects from been inserted to the device. Separate signal cables from power supply cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables.

ATTENTION: Read carefully the technical specifications and make sure that the working conditions are appropriate. According to safety standards, the device must be fastened in such a way that it cannot be removed without the use of tools.

Dimensions are in mm. The device is mounted on panel hole with cut 29x71mm and restrained with plastic side brackets



PARAMETER'S TABLE

No		description	min	max	RH2	UOM
1	SP1	SET POINT1: humidity control of relay 1	LSP	HSP	50.0	%RH
2	SP2	SET POINT2: temperature control of relay 2	-40.0	+120	40.0	°C
3	Cod	Enter password Cod = 22 and press  to access all parameters menu	0	255	0	-
ANALOG INPUT						
4	dF1	Differential of room humidity SP1 (humidifier delay)	0.1	25.5	5.0	%RH
5	dF2	Differential of room temperature SP2 (thermostat delay)	0.1	25.5	5.0	°C
6	LSP	Lower setting limit of SP1 (humidity set point)	0.1	99.9	10.0	%RH
7	HSP	Maximum setting limit of SP1 (humidity set point)	0.1	99.9	80.0	%RH
8	dEC	Temperature indication as integer or decimal, where 0 = integer / 1 = decimal	0	1	1=decimal	-
9	Srt	Display humidity or temperature in the main screen, where 0 = humidity / 1 = temperature	0	1	0=humidity RH	-
10	SE1	Humidity sensor offset	-9.9	+15.5	0.0	%RH
11	SE2	Temperature sensor offset	-9.9	+15.5	0.0	°C
ALARMS						
12	AHL	Low room humidity	0.0	99.9	30.0	%RH
13	AHH	High room humidity	0.0	99.9	80.0	%RH
14	AtL	Low room temperature	-40.0	+120	20.0	°C
15	AtH	High room temperature	-40.0	+120	60.0	°C
16	At2	Time delay in activating low and high room humidity alarms (AHL, AHH)	0	255	0	min
17	At3	Time delay in activating low and high room temperature alarms (AtL, AtH)	0	255	0	min
RELAYS						
18	HC1	Humidity relay operation 0=cooling (dehumidification), 1=heating (humidity)	0	1	0=dehumidification	-
19	HC2	Temperature relay operation where 0 = cooling / 1 = heating	0	1	0=cooling	-
20	roC	Selection of temperature relay to work based on measurement of humidity or temperature 0 = based on humidity / 1 = based on temperature	0	1	1=temperature	-
21	CP1	Minimum time OFF for relay 1	0	60	0	min
22	Ct1	Minimum time ON for relay 1. By adjusting timer CT1, the ON/OFF cycle of relay 1 is activated for as long as relay 1 is OFF due to SP1. The cycle is the following: relay 1 is deactivated for time CP1 and activated for time CT1 etc.	0	60	0	min
23	CP2	Minimum time OFF for relay 2	0	60	0	λεπτά
24	r2A	If the room temperature is lower than the adjusted r2A temperature, then relay 2 is deactivated under any circumstance.	-40.0	+120	10.0	°C
25	r2b	Timer r2b starts counting down the moment timer CP2 elapses and as long as the SP2/dF2 condition applies. Relay 2 remains deactivated until timer r2b elapses. It will be activated once timer elapses and as long as the SP2/dF2 condition still applies.	0	60	0	min

26	r2C	If the room temperature is higher than the adjusted r2C temperature, then relay 2 is activated under any circumstance.	-40.0	+120	20.0	°C
27	rto	Relay 1 operates in parallel with relay 2, where: 0 = relay 1 operates independently - according to its setup 1 = relay 1 is activated when relay 2 is activated also. Once relay 2 is deactivated, relay 1 is activated immediately, disregarding timer CP1.	0	1	0	-
28	rLS	Relay status in case of sensor failure – LF1/LF2: 0 = both relays are deactivated 1 = relay 1 is activated and relay 2 is deactivated	0	1	0	-
NETWORK - GENERAL SETTINGS						
29	Add	Device address on network	0	255	1	-
30	trE	Response time of the device on network	5	100	40	msec
31	bAU	Baud rate: $0 = 2400 / 1 = 4800 / 2 = 9600 / 3 = 19200$ Enter the new value, exit the parameter menu by pressing  and toggle the power supply of the device	0	3	3	-
32	Pro	Cabinet's program (factory settings) is displayed – no access	-	-	31	-
33	tPE	Unique product number - no access	-	-	203	-
34	SrU	Room service: after the end of the selected time, 'SrU' is displayed and informs that the room needs service. The thermostat continues to operate normally and its functions are not suspended. -1 = disabled function 0 to 150 weeks = remaining time to activate the 'SrU' room service notification. The countdown starts once a new value is stored. Whenever we enter the parameter, the remaining time until the activation of 'SrU' notification is displayed. To deactivate the notification, insert SrU = -1.	-01	150	-01	weeks
35	Uer	Firmware version - no access	-	-	3.X.X	-

ALARM'S TABLE

1	LF1	Humidity sensor malfunction, where both relays are OFF automatically
2	LF2	Temperature sensor malfunction, where both relays are OFF automatically
3	AHH	Low room humidity
4	AHL	High room humidity
5	AtL	Low room temperature
6	AtH	High room temperature
7	SrU	room service notification: timer has elapsed and the cabinet needs a service (see parameter 45, SrU)
8	EER	Error in memory RAM: re-enter the SP1 (see ADJUSTING TEMPERATURE – SET POINT page 1)
The alarms are automatically deactivated once the cause of the alarm disappears		



Made in Greece.

The device is under two year's guarantee. The guarantee is valid only if the manual instructions have been applied. The control and service of the device must be done by an authorized technician. The guarantee covers only the replacement or the service of the device. KIOUR PC implements a Quality Management System according to EN ISO 9001:2015 Standard with registration number 01013192. KIOUR preserves the right to adjust its products without further notice.