ATTENTION

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. <u>The device must be disposed of in accordance with local standards for the collection of electrical and electronic equipment.</u>

DESCRIPTION

RH1R has a sensor which reads the humidity (0-100% RH) and the temperature (-40-125°C) of a room. It controls through a 16A relay the humidity of the room and can operate to increase or decrease the humidity via a parameter adjustment. Through the serial input it can connect to the CAMIN modbus network for full control and monitoring of the device

PROGRAMMING THE PARAMETERS

By pressing ← we **enter or exit** the parameter's menu.

The first parameter **SPo** is displayed and with the ▲, ▼ we scroll into the parameters based on the parameter's table below.

By pressing **SET** the value of the parameter is displayed and with the ▲, ▼ we adjust the value.

By pressing ← or **SET** we **confirm** the new value and the name of the parameter is displayed.

TEMPERATURE INDICATION

By pressing ▲ the room temperature is displayed.

TECHNICAL SPECIFICATIONS

Power supply: 230VAC 50/60Hz / Maximum power consumption: 3W
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 Φ8mm 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
Relay 250VAC 16A
Operating temperature: -15÷+55°C / Storage temperature: -20÷+80°C
The device is mounted on Ω rail / Dimensions 70x90x65mm
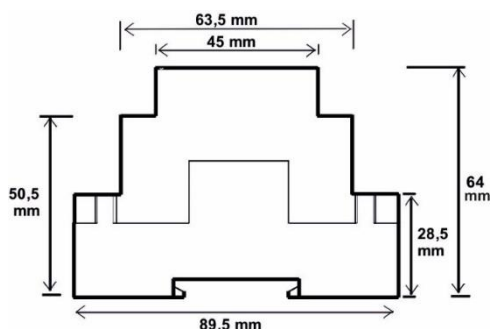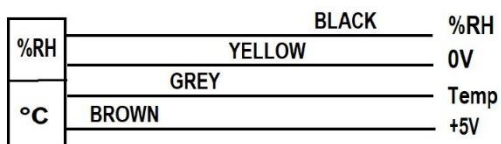Connection with terminal blocks 18A

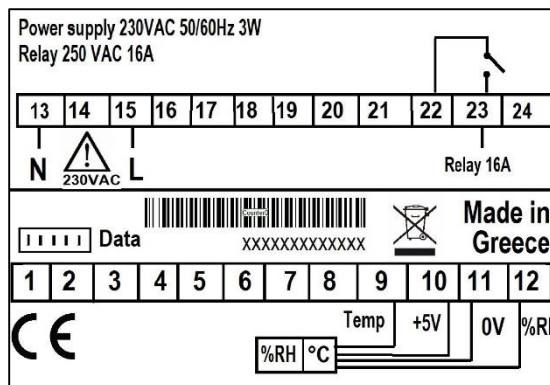| Indications	
💧	relay ON
%RH	humidity indication
°C	temperature indication
⚠	alarm ON
🔧	malfunction ON

SERIAL INPUT

RH1R can connect to the key programmer or to the data logger Mini Logger or to the KIOUR CAMIN network or to any modbus network.

- **Key programmer:** controller's parameter values can be saved or retrieved from the programming key. Plug in the programming key to the controller and press at the same time **SET**+▲. The device connects to the key and the message **Eo** is displayed. By pressing ▲ the device downloads the parameters from the key and the message **ro** = read O.K. or **rF** = read Fail is displayed. By pressing ▼ the device uploads the parameters to the key and the message **Yo** = Write O.K. or **YF** = Write Fail is displayed. In case of failure (**rF** or **YF**) reenter the key to the serial input and repeat the procedure from the beginning. The key can connect to all **KIOUR** devices. If you try to read the parameters of a different device, message **rF** is displayed. At any time, we can perform the aforesaid operation. After 10sec the key is disconnected.
- **Data logger Mini Logger:** the controller is connected to the data logger via cable and by programming the parameter Add = 1. Automatically, based on selected minutes, the data logger writes to a microSD memory card the controller's temperatures, status and alarms.
- **CAMIN network:** the controller can connect to the CAMIN network via an interface NET-INS-485. CAMIN is an PC software application designed to collect information, watch and fully control a net of KIOUR devices while sending SMS and email in case of an alarm. The maximum length of the net can be 1000 meters.

CONNECTIONS - DIMENSIONS

SENSOR CONNECTIONS MODEL SHT

CONTROLLERS CONNECTIONS

PARAMETER TABLE

No		description	min	max	RH1R	M.M
1	SPo	SET POINT: humidity control of room	LSP	HSP	50.0	%RH
2	Cod	code to enter parameter's menu Cod = 22 resetting to factory settings RH1 adjust Cod = 31 and exit from the parameters menu	0	255	0	-
3	LSP	minimum limit of SPo	0.1	HSP	10.0	%RH
4	HSP	maximum limit of SPo	LSP	99.9	80.0	%RH
5	diF	differential relay function	0.1	25.5	20.0	%RH
6	tOF	minimum time OFF of the relay	0	255	0	min
7	dAL	time delay in activating alarms "AHi" and "ALo"	0	255	0	min
8	rHC	relay operation, where 0=dehumidification, 1=humidity	0	1	0=dehumidification	-
9	dEC	temperature indication as integer or decimal, where 0= integer, 1= decimal	0	1	1=decimal	-
10	ALo	low humidity alarm setting	0	AHi	30.0	%RH
11	AHi	high humidity alarm setting	ALo	99.9	80.0	%RH
12	AJH	humidity indication offset	-9.9	15.5	0.0	%RH
13	AJc	temperature indication offset	-9.9	15.5	0.0	°C
14	Add	address of device on network mode	0	255	1	-
15	trE	response time of the device on the network	30	115	30	msec

ALARM TABLE

1	LF1	humidity sensor malfunction (temperature sensor malfunction is not available)
2	ALo	Low humidity alarm
3	AHi	High humidity alarm

The alarms are automatically deactivated when the cause of the alarm disappears.

Made in Greece.

ATTENTION according to safety standards, the device must be properly positioned and protected from any contact with electrical parts. All parts that provide protection must be fastened in such a way that they cannot be removed without the use of tools. **ATTENTION**: disconnect the power supply of the device before proceeding to any kind of maintenance. **ATTENTION**: do not place the device near heat sources, equipment containing strong magnets, in areas affected by direct sunlight or rain. **ATTENTION:** prevent electrostatic discharges at the side slots of the device and sharp objects from been inserted. **ATTENTION:** separate the signal's cables from the power supply's cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables. **Use the device only as described in this document, not to 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. Read and keep these instructions.** The device is under two year's guarantee of good operation. 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 preserves the right to adjust its products without further notice.