Room Temperature & Humidity Sensor
0...10V / 0…20mA: HRM-320P

Product Type

Voltage & current output temperature & humidity sensor.
Range of operation 0…50 °C, 0…100 % r. h.

Application

Obtaining room and indoor spaces temperature & humidity in heating, ventilation and air conditioning plants.

Obtaining room and indoor spaces temperature& humidity in building automation systems.

Order number description

Order number	Measuring range	Operating voltage	Output signal
HRM-320P	Temperature: 0...50 °C Humidity: 0…100 %r.h.	15…30Vdc	0…10Vdc & 0…20mA

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Rev. 0, Spring 2019

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Function

The sensor monitors the room / space temperature & humidity via its sensing element.

Temperature & humidity effects sensing element signal parameters. These parameters converted to standard signals in output by appropriate electronic circuitry.

There is a fine tune potentiometer to adjust zero-temperature or zero-humidity corresponding output signal (0 volt / 0mA) preciously.

Mechanical design

The units have been designed for wall mounting. They are suited for use with internally laid cables or wires (concealed wiring).

The units consist of 2 major sections: Housing and base. Both snap together but can be detached again. The base carries the connection terminals.

Disposal

The devices are considered electronics devices for disposal and may not be disposed of as domestic waste.

Dispose of the device via the channels provided for this purpose.

Comply with all local and currently applicable laws and regulations.

Engineering notes

The permissible cable lengths are dependent on the type of controller with which the sensor is used. They are specified in the Data Sheet of the relevant controller.

It is preferred to use current output signals in long distances and also where there is noise risks.

Mounting notes

Location: On an inner wall of the space to be heated or air conditioned. Not in recesses, shelves, not behind curtains, not opposite or near heat sources.

The unit must not be exposed to direct solar radiation.

The end of the conduit at the sensor rear must be sealed to prevent false measurements due to drafts through the conduit.

The permissible ambient conditions should be observed.

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Technical Data

Functional Data	Range of use	Refer to "Page 1"
	Type of measurement & output	Temperature & Humidity
		0...10Vdc & 0...20mA for both
Degree of protection	Safety class	Not defined
	Degree of protection for housing	Not defined
Electrical connections	Screw terminals	Max. 4x1.5mm^2
	Perm. Cable lengths	Refer to "Engineering notes"
Environmental Conditions	Operation condition	Temperature: 0…60°C
		Humidity: 0…<100% r.h.

Internal diagram
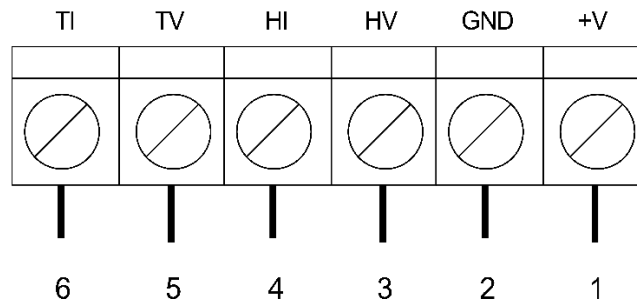
+V: +24Vdc power supply
GND: power supply ground
HV: 0…10Vdc output for 0…100% r.h. humidity
HI: 0…20mA output for 0…100% r.h. humidity
TV: 0…10Vdc output for 0…50°C temperature
TI: 0…20mA output for 0…50°C temperature

Output voltage / current signal are in relative to GND terminal.

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Dimensions (mm)