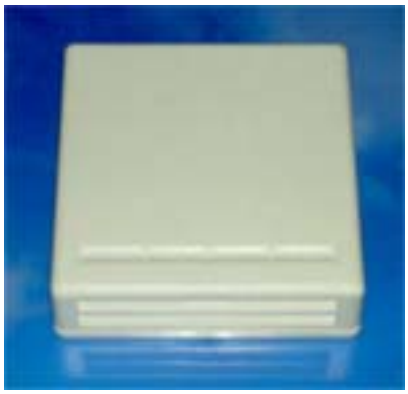
SOLiTON Control Systems

HUMIDITY AND AIR TEMPERATURE SENSOR



For order:

HTRS-N for controllers MicroNet series MNN type (MN 300/440/500/620)
HTRS-L for controllers MicroNet series MNL type (50/110/130/100/150/200/800)

The HTRS is a wall mounted sensor to provide air temperature and relative humidity measurement in room. Measuring range of relative humidity: 0-100%. Sensor of temperature is intended for use with temperature inputs of MicroNet controllers. The HTRS permits monitoring and control of air temperature and humidity in HVAC system.

FEATURES

- Measurement of air temperature and relative humidity in room
- Output signal: humidity - 0-10VDC
- temperature – resistance, NTC
- High accuracy
- Small response time
- Low energy consumption
- Stability in time
- Easy installation

TYPE	MOUNTING	SENSING	CONTROL RANGE	OUTPUT	VOLTAGE	ACCURACY AT +25°C
HTRS	Indoors	Relative humidity	0-100%RH	0-10VDC	24V ac/24V dc	±2%RH
		Temperature	-5 … 55°C	See Fig. 1		±0,2°C

Protection Class: IP 20
Sensing element: Humidity: integrated transduser
Temperature: NTC termistor
Wiring: Humidity: 3 wires; output, ground, supply
Temperatures: 2 wires
Temperature range: -5…55°C
Humidity range: 0…100%RH
Housing: Cast, fire resistant plastic, back plate, corresponding UL94V-0
Colour of housing: White
Terminals: 5x1,5mm^2
Characteristic: Non linear – see Fig. 1

CHARACTERISTICS

T, °C	HTRS-L, KOm	HTRS-N, KOm
25	**5.23810**	**5.02488**
-10	8.93304	8.47165
0	8.01161	7.66082
10	6.93687	6.66667
20	5.79794	5.57326
30	4.69595	4.49248
40	3.70733	3.51744
50	2.87538	2.70180
60	2.20640	2.05593
70	1.68514	1.56261

Sensor Temperature v Resistance

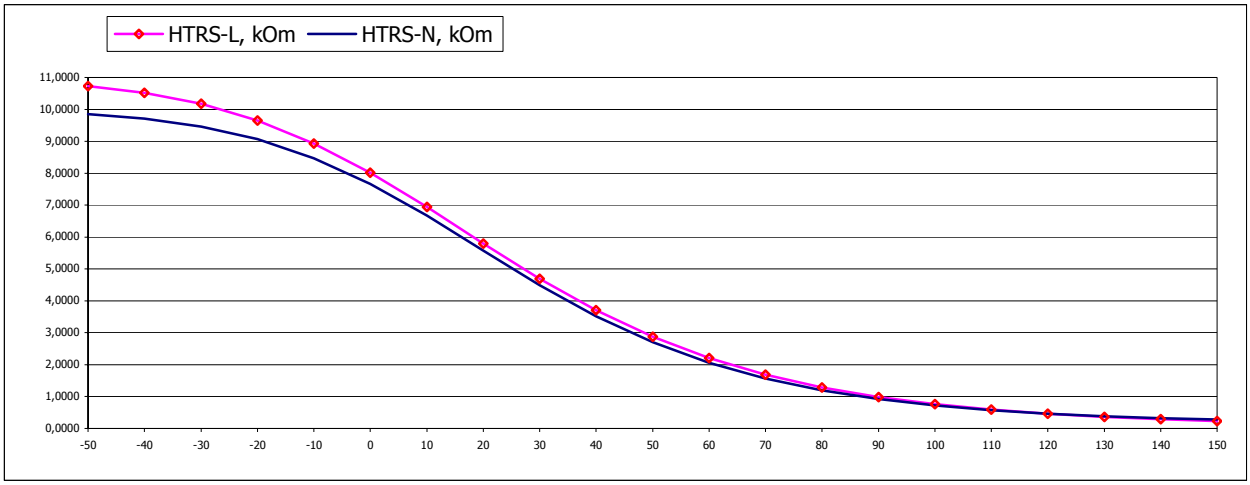


Fig. 1

WIRING DIAGRAMS

Wiring diagrams see on fig. 2,3

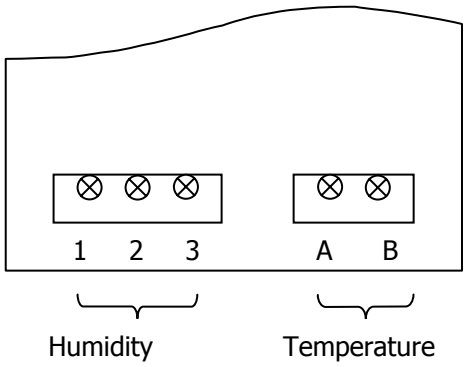


Fig. 2

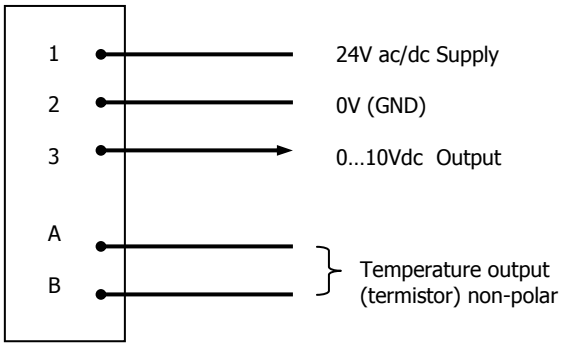


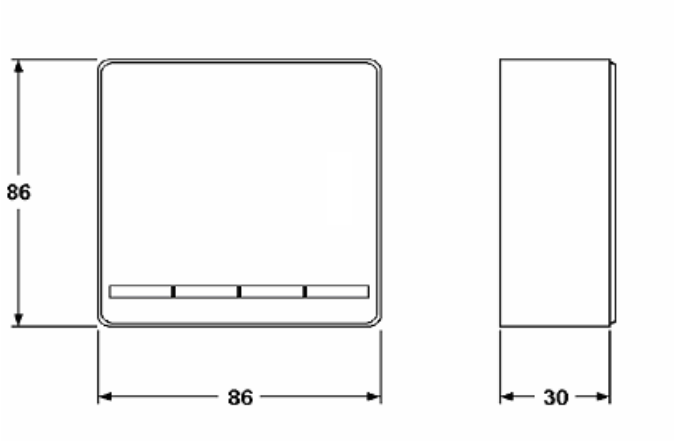
Fig. 3

It is recommended to use the shielded cable
Earth screen at the controller end only
Maximum resistance is 15Ω per core.

INSTALLATION

Select a location for the sensor which is representative of the space to be controlled and where it will be readily affected by changes in the general space temperature level. The sensor location should also be reasonably clean and free from damp and condensation.

DIMENSION DRAWINGS



Dimensions in mm

Cautions

- **Do not apply power to the system until it has been checked by a qualified technician and the commissioning procedures have been completed**
- **These sensors must only be used in conjunction with the appropriate controllers shown on page 2**
- **Observe wiring precautions given on the data sheet for the controller that the sensor will be connected to.**
- **Do not exceed the maximum ambient temperature.**
- **Design and performance of Soliton equipment are subject to continuous improvement and therefore liable to alteration without notice.**
- **Information is given for guidance only and Satchwell do not accept responsibility for the selection and installation of its products unless information has been given to the Company in writing relating to a specific application**
- **A periodic system and tuning check of the control system is recommended. Please contact your local Soliton service office for details.**

Soliton Controls Systems

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