Model RTH
Temperature & Humidity Recorders
Models RTH101A, RTH102A & RTH103A

• Temperature and/or humidity recording at low cost
• Simple installation & maintenance
• Uses proven bimetallic coil and hygroscopic membrane for reliable results

Introduction
The RTH100 Series of temperature and humidity circular chart recorders uses the proven design combination of bimetallic coils and hygroscopic membrane for the direct measurement of temperature and humidity.

Changes in atmospheric temperature and humidity are detected by the two elements within the recorder. The bimetallic coil monitoring the temperature and hygroscopic membrane monitoring the humidity.

Air is drawn through the instrument and over the two sensing elements by an electrically driven fan. Expansion or contraction of the bimetallic coil, due to temperature change, causes the pen movement by direct linkage. Similarly a change in humidity causes extension, or contraction, of the hygroscopic membrane and direct linkage again causes movement of the second pen.

Specifications

Range
Temperature: 0º to 40º or 20º to 100ºF
Humidity: 20 to 100% RH (see notes)

Measuring System
Temperature: Bi-metallic coil
Humidity: Hygroscopic membrane

Accuracy
Temperature: ±1% of the chart range
Humidity: ±2% within the limits 30 to 85% RH and 1º to 40ºC

Chart
Diameter: 240 mm diameter

Drive: Electrical motor
24 hour or 7 day rotation as standard 3 hour, 6 hour, 12 hour and 28 day on application

Power Supplies
Voltage requirements: 110V or 230V 50/60 Hz
Power requirements: <20VA
Insulation, contact to earth: 2kV

Environmental Data
Storage temperature limits:
Temperature instruments: -10º to +50ºC
Temperature/humidity inst.: 0º to 40ºC

Storage humidity limits
Temperature instruments: 0 to 90%RH
Temperature/humidity inst.: 20 to 85% RH

Casing
Glass filled resin case with lockable hinged door with perspex window (polycarbonate to special order)

Mounting
Ambient sampling Wall or flush panel or portable*
Remote sampling Wall

Note
When panel mounting, a suitable air circulation must be provided to the duct intake and the inlet and outlet ports must not be restricted.
* Free standing portable version available (ambient sampling type only)

Weight
6.5 Kg approx.

Sampling Type
Total sampling line length is restricted to 1 metre max (20mm OD)

Note
Where the temperature difference between sample air and case exceeds ±5ºC then the sample line must be thermally insulated

Note
Should the RH go above 85% RH it is possible that water droplets may form on the element. This may have a temporary or permanent affect on the calibration.
Dimensions & Fixings

[Diagram showing dimensions and fixings]

World-Wide Reliability & Quality

Rototherm’s high quality and performance is guaranteed by an uncompromising approach to quality. British Rototherm’s policy has always been to maintain a consistently high level of quality and reliability throughout its product range and service to customers.

The company has worked energetically towards establishing comprehensive quality controls and has earned a worldwide reputation for product quality.