

# HYGROPALM



## HANDHELD INSTRUMENT FOR EVERY APPLICATION.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

### INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Relative humidity, temperature and dew point measurement
- All psychrometric calculations available
- Outstanding accuracy and repeatability
- 2,000 data point memory
- Auto-diagnostics and automatic correction
- Highest-possible measuring accuracy



**rotronic**  
LEADING IN HUMIDITY MEASUREMENT

## SPECIFY THE BEST: HYGROPALM ADVANTAGES AT A GLANCE.

The HygroPalm2-series is the latest development in handheld measuring instruments for relative humidity, temperature and dew point. Based on AirChip3000 technology, the instruments achieve a degree of accuracy not seen before.

In combination with advances in sensor technology and integration, the HygroPalm2-series provides superb precision and state-of-the-art functionality, taking humidity, temperature and dew point measurements to a whole new level in performance and reliability ( $< 0.8\% \text{rh} / 0.1 \text{K}$ ).

### Flexible choice of probes

- The HygroPalm21 has an integrated probe and the HygroPalm22 can be used with an interchangeable probe

### Practical display

- Clear, backlit graphic display for easy reading



TECHNOLOGY

### AirChip3000

- Compensates humidity and temperature over 30,000 reference points
- 2,000 data point memory
- Dew/frost point calculation
- Sensor auto-diagnostics and automatic correction
- Active alarming and information
- ASIC (Application Specific Integrated Circuit), micro-controller and EEPROM on one chip

### Tried-and-tested housing

- Ergonomic and robust ABS housing with rubber grip for secure handling



## APPLICATIONS.

The HygroPalm2-series (with integrated or interchangeable probes) is ideal for all applications where exact measurement of humidity and temperature is of decisive importance, e.g. the food and pharmaceutical industries, printing and paper industries, many trades, the sciences, meteorology, agricultural sector, climatology, etc. There is hardly a field today in which these parameters may be ignored. It is ultimately the measuring task in hand that defines the HygroPalm instrument that best meets your needs.



Museums,  
art galleries



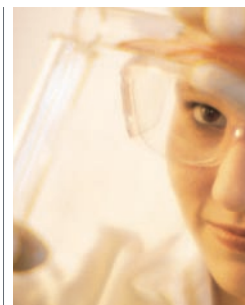
Food industry



HVAC / Building  
management



Paper industry



Healthcare,  
the sciences

## PROBES FOR HYGROPALM22.

Whether you need a simple plug-in probe for use with a handheld instrument or data logger, or a more sophisticated cable probe for high temperature and other special applications, we can provide you with the ideal HygroClip2 probe to suit your requirements. All HygroClip2 probes can be individually calibrated and adjusted to increase measurement precision where you need it the most. This capability is exactly what makes every probe in the product range a high-end solution for your application.

### Standard Climatic Probes

Probes with maximum accuracy, for all climatic measurements, operating range -40...100 °C



### High Temperature Probes

Hand-held probes for applications to 200 °C  
Probe length 250 and 400 mm Ø15 mm



### Miniature Probes

4 and 5 mm probes for measurements in confined spaces such as packaging etc. and for building material tests



### Sword Probes

Sword probes for measurements in paper, cardboard and textile stacks



An up-to-date overview of our extensive range of accessories such as cables, filters, sets, software and calibration equipment as well as further information on the HygroPalm21/22 is available on our web site [www.rotronic-humidity.com](http://www.rotronic-humidity.com).

## TECHNICAL INFORMATION.

### Factory Adjustment.

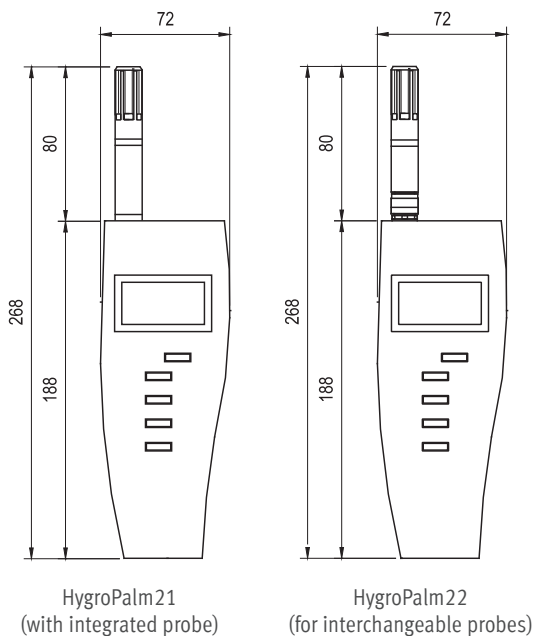
Three different adjustment profiles are available from the factory for the HygroClip2; this means that measuring accuracy can be matched to the application need. The custom adjustment profile consists of 20 humidity values at 3 temperatures to ensure optimum performance over a required working range. The data is stored on the AirChip and can be retrieved later for audit purposes.

### Sensor Diagnostics.

The intelligence of AirChip3000 technology enables advanced sensor diagnostics. Should the sensors deviate from factory defined parameters, measurement values can be compensated automatically and a digital alarm triggered.

### Data Logging and Alarm Generation.

Up to 2,000 measurement values can be stored in the HygroClip2 probe; the user is able to configure the measurement interval, set alarm limits, scale the output signal and download data using optional ROTRONIC HW4 software. The HygroClip2 probe can be programmed with set limits to generate an alarm which is available when the probe is communicating with a PC or compatible ROTRONIC device. Thus, the HygroClip2 can be integrated in any application.



	HP21	HP22
No. of probe inputs / Probe type	Integrated sensors	1/HygroClip2®
Humidity sensor	Hygromer® IN-1	Depending on probe
Temperature sensor	Pt100 1/3 Class B	Depending on probe
Probe cable extension	N/A	Passive: max. 5 m, active 100 m
Accuracy at 23±5 °C	± 1.0 %rh / ± 0.2 K	Depending on probe & adjustment profile
Resolution AirChip3000	< 0.02 %rh / 0.01 K	
Long-term stability humidity sensor	<1 %rh / year	
Response time τ63	<10 seconds	Depending on probe
Initialisation time	Typically 3 seconds	
Measurement range	-10...60 °C / 0...100 %rh	-50...200 °C
Electronics operating range	-10...60 °C / 0...100 %rh	
Display type	Graphic display, backlit, Parameters configurable	
Trend indicator	Yes	
Power supply	9 V battery / mains adaptor	
Power consumption	Typically 4mA with backlight off	
Battery indicator	Low battery indicator	
Firmware update	Possible via HW4 software	
Sensor diagnostics (drift, state)	Programmable, default: off	
Sensor protection	Polyethylene filter	Depending on probe
Max. wind speed at probe	20 m/sec	Depending on probe
Probe adjustment by keypad	1-point offset	Multipoint
Probe adjustment by HW4 software	Humidity: Multi point, Temperature 2 point	
Data logging 2000 data point memory	internal	in probe
Psychrometric calculations	Dew point	All available
PC interface Data processing	Via ROTRONIC Interface cable, HW4 compatible	
Dataprocessing by HW4	Graphs, statistics, analyses, qualification etc.	
Audit Trail & Electronic Records	FDA-CFR21 Part 11 / GAMP compliance	
Housing material / weight	ABS / approx. 210g	
Norms	CE-compliant, 2007/108/EG	
IP & fire protection rating	IP40 / complies with UL94-HB	

Interested in further information (special applications, order codes, etc.)? A complete and up-to-date overview of our HygroPalm21/22 series is available on our web site [www.rotrotronic-humidity.com](http://www.rotrotronic-humidity.com).

Change over now to the HygroClip2 with its integrated AirChip3000 for your temperature and moisture measurements. You can find detailed information about our probes at [www.rotrotronic-humidity.com](http://www.rotrotronic-humidity.com). We would also be happy to advise you in person either on the phone or at our showroom.

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