

HANDHELD FOR HUMIDITY AND TEMPERATURE

# HYGROPALM23



## THE PERFECT HANDHELD INSTRUMENT FOR CLIMATIC MEASUREMENTS.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

### INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Highest-possible measuring accuracy
- Guarantees absolute reproducibility
- Measures relative humidity and temperature and calculates all psychrometric values
- Two interchangeable probe inputs, digital or analog
- 20,000 data point memory
- Data capture of 250 data points each for up to 8 defined locations
- Probe adjustment direct to dew point reference
- Battery charge indicator and recharging function



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LEADING IN HUMIDITY MEASUREMENT

# HYGROPALM23

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

The HygroPalm23-series is the latest development in handheld measuring instruments for relative humidity, temperature and dew point. Based on AirChip3000 technology, this indicator achieves 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 and temperature measurement to a whole new level of performance and reliability ( $\ll 0.8\% \text{rh} / 0.1 \text{ K}$ ).

### Flexible choice of probes

- The HygroPalm23 can be fitted with interchangeable probes
- Has 2 probe inputs
- Connection of HygroClip2 or analog probes possible

### Interface

- Easy and quick access to service connector possible
- Mini USB interface available
- Offers extended calibration and calculation functions

### Practical display

- The clear, backlit graphic display is easy to read and the simple menu navigation quickly takes the user to all information available
- Trend indication of values configurable
- Saves the momentary state (capture logging) and allows reading out of all values
- Battery charge indicator
- Display resolution to 3 decimal places
- Various display types possible



Standard



3-line



Large

### Praxiserprobtes Gehäuse

- Ergonomic and robust ABS housing with rubber grip for secure handling
- IP 40 protection

### Battery/Rechargeable battery compartment

- Battery or rechargeable battery holder with lock
- The battery voltage of 9 V serves to supply third-party probes
- With recharging function



## APPLICATIONS.

The HygroPalm23-series 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 at 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 HYGROPALM23.

Whether you need a simple climate probe for measuring ambient conditions 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 Climate 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



### Any Analog Probes

Use your probes for analog signals such as, for example, for measurement of wind velocity



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 HygroPalm23 is available on our web site [www.rotronic-humidity.com](http://www.rotronic-humidity.com).

## TECHNICAL INFORMATION.

### Data Logging.

Keep track of the past. The values stored in the instrument can be displayed graphically with the optional software HW4. You can define the storage intervals, the alarm limits, the type of alarm generation (analog or digital), the scale and much more yourself. The HygroClip2 can therefore be integrated in any application.

### Data Capture.

The handheld instrument HP23 offers you the possibility to record up to 8x250 data points. These data, including time stamp, can be called up individually, thereby providing perfect room surveillance. Thanks to this function, the handheld instrument is ideal for everyday use.

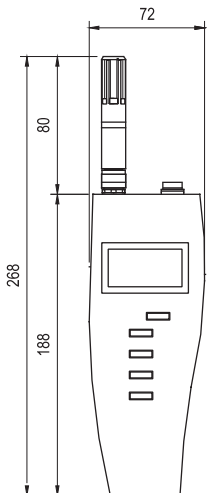
### Adjustment.

There are three different adjustment profiles for measuring accuracy available as options. With the top version the instrument is adjusted at 20 humidity values and three different temperatures. A further advantage of this version: the data are stored on the AirChip and can therefore be used for, for example, audits.

### Sensor Diagnostics.

The intelligence of AirChip3000 technology enables advanced sensor diagnostics. Should the sensors deviate from factory defined parameters, the measured values are compensated electronically. You can select whether the values are merely to be compensated or whether an alarm should also be emitted.

	HP23
No. of probe inputs	2 (HygroClip2 or analog)
Humidity sensor	Depends on probe
Temperature sensor	Depends on probe
Accuracy at 23 ±5 °C	Depends on probe used (0.8 %rh / 0.1 K)
Resolution AirChip3000	< 0,02 %rh / 0.01 K
Long-term stability humidity sensor	< 1 %rh / year
Response time τ63	Depends on probe (< 12...<3 s)
Start-up time	Typically < 3 s
Measurement range	Depends on probe
Electronics operating range	0...100 %rh / -10...60 °C
Display type	Graphic display, backlit, parameters configurable, 3 decimal places
Alarm indicator	Yes
Real-time clock	Yes, with backup battery
Trend indicator	Yes
Power supply	9 V block battery or rechargeable battery
Power consumption	Typically 10 mA with backlight off
Power for 3rd-party probes	Yes, battery voltage
Battery indicator	Yes, low battery indicator
Firmware upgrade	Yes, via HW4 software
Sensor diagnostics (drift, state)	Programmable, default: off
Filter	Depends on probe
Max. air velocity at sensor	Depends on probe
Humidity / Temperature adjustment from keyboard	Yes, 1-point or multipoint temperature and humidity adjustment
Humidity / Temperature adjustment via dew point reference	Yes, temperature 2-point / humidity max. 100 points
Adjustment with software	1-point & multipoint (%rh / °C), with service cable
Data logging memory function	20,000 data points (2 x 10,000 data point pairs)
Psychrometric calculations	Dew point, wet-bulb temperature, ratio of mixture, enthalpy, water vapor content, water vapor density
Event logging	Yes
Interface	Mini USB
Device lock	Via service cable & HW4 software
Data processing with HW4	Graphs, statistics, analyses, qualification, etc.
Max. length service cable	5 m
Housing material / weight	ABS / approx. 300 g
Dimensions	196 x 72 x 35 mm
Standards	CE-compliant 2007 / 108 / EC
Audit trail & electronic records	FDA-CFR21 Part 11 / GAMP compliance
IP & fire protection rating	IP 40 / Complies with UL94-HB



### Analog Probe Input

Socket (instrument):  
The numbers are given for illustration purposes only and are not marked on the socket.

- 1) RXD UART digital probe
- 2) GND (digital and power)
- 3) V+: digital probes: 3.3 VDC nominal, analog probes: max. 5.0 VDC, 10 mA
- 4) AGND (analog ground)
- 5) Not used
- 6) One-channel analog probe signal: +0.0 to 3.3 VDC
- 7) TXD UART digital probe

### Accessories

Order no.: A-02XX  
Description: Cable adapter, 2 m, with open ends for analog probe input

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

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