HANDHELD FOR HUMIDITY AND TEMPERATURE

HygroPalm23

AIR CHIP TECHNOLOGY



THE PERFECT HANDHELD INSTRUMENT AND CALIBRATOR FOR CLIMATIC MEASUREMENTS.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Highest possible measuring accuracy
- Ensures measurement reproducibility
- Relative humidity and temperature measurement and calculated psychrometric values
- Two interchangeable probe inputs, digital or analog
- 20,000 data point memory with real-time clock
- Data capture of 250 data points each for up to 8 defined locations
- Probe adjustment with dew point reference
- Battery status indicator and charging function



rotronic

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HygroPalm23

SPECIFY THE BEST:
HYGROPALM ADVANTAGES AT A GLANCE.

The HygroPalm23 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 HygroPalm23 provides superb precision and state-of-the-art functionality, taking humidity and temperature mesurement to a whole new level of performance and reliability (< 0.8 %rh / 0.1 K).

Flexible choice of probes
- The HygroPalm23 can be fitted with interchangeable probes
- Has 2 probe inputs
- Connection of HygroClip2 or analog probes possible
- No adjustment required for HygroClip2 probes

Interface
- Easy and quick access to service connector possible
- Mini USB interface available for a PC running HW4 software
- Offers extended calibration and calculation functions
- Remote connection to HygroClip2 transmitters

Practical display
- The clear, backlit graphic display is easy to read and the simple menu navigation provides fast access to all the information available
- Trend indication of values
- Saves measurements (capture logging) and allows display of all values
- Battery status indicator
- Display resolution to 3 decimal places
- Various display formats available



Standard



3-line



Large

Ergonomic housing
- 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 powers third party probe (max. 5 V)



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APPLICATIONS.

The HygroPalm23 is ideal for all applications where precise measurement of humidity and temperature is required e.g. the food and pharmaceutical industries, printing and paper industries, the sciences, meteorology, agriculture, climatology and many more. There is hardly a field in which these parameters may be ignored. It is ultimately the measuring task at hand that defines the HygroPalm instrument and probe that best meets your needs.



Museums,
art galleries



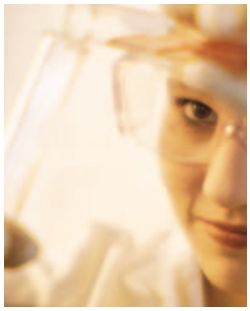
Food industry



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 mount 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 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 ranges -40...100 °C, 0...100 %rh



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



Analog Probes

Connect analog probes for the measurement of wind velocity, pressure etc.



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TECHNICAL INFORMATION.

Data Logging.

View historical data. The values stored in the instrument can be displayed graphically with the optional HW4 software. You can define the storage intervals, the alarm limits, the type of alarm generated (analog or digital probes), the scaling and much more. The HygroPalm23 can therefore be integrated in any application.

Data Capture.

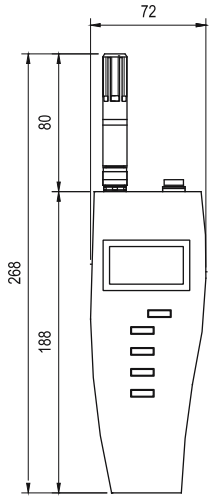
The HP23 handheld instrument offers you the possibility to record up to 8x250 data points. This data, including time stamp, can be called up individually, thereby providing perfect multi-room monitoring. Thanks to this function, the handheld instrument is ideal for everyday use.

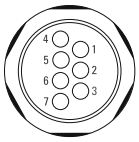
Adjustment.

There are three different adjustment profiles for measurement accuracy available as options. With the highest 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 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 to be compensated and whether an alarm is to be given.





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) Single channel analog probe signal: +0.0 to 3.3 VDC
7) TXD UART digital probe

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

	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)
Long-term stability humidity sensor	‹ 1 %rh / year
Response time τ63	Depends on probe
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 battery or rechargeable battery
Power consumption	Typically 10 mA with backlight off
Power for 3rd-party probes	Yes, battery voltage
Battery indicator	Yes, status 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 multi-point temperature and humidity adjustment
Humidity / Temperature adjustment via dew point reference	Yes, temperature 2-point / humidity max. 100 points
Adjustment with software	1-point & multi-point (%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, mixing ratio, 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

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