HygroPalm

AIR CHIP

TECHNOLOGY

HANDHELD INSTRUMENT FOR EVERY APPLICATION.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Relative humidity and temperature measurement
- Dew Point and other psychrometric calculations
- 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, 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 mesurement to a whole new level of performance and reliability (< 0.8 %rh / 0.1 K).

Integral or interchangable probe
• The HygroPalm21 has an integral probe and the HygroPalm22 is used with an interchangeable probe

Easy to read display
• Clear, backlit graphic display for easy reading

AIR CHIP
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 at hand that defines the HygroPalm instrument that best meets your needs.
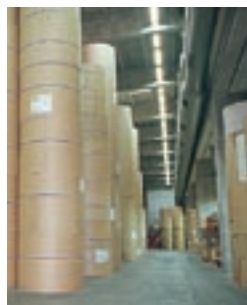
Museums,
art galleries

Food industry

HVAC / Building
management

Paper industry

Healthcare,
the sciences

PROBES FOR HYGROPALM22.

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

Miniature Probes

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

High Temperature Probes

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

Sword Probes

Sword probes for measurements in paper, cardboard and textile stacks

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.
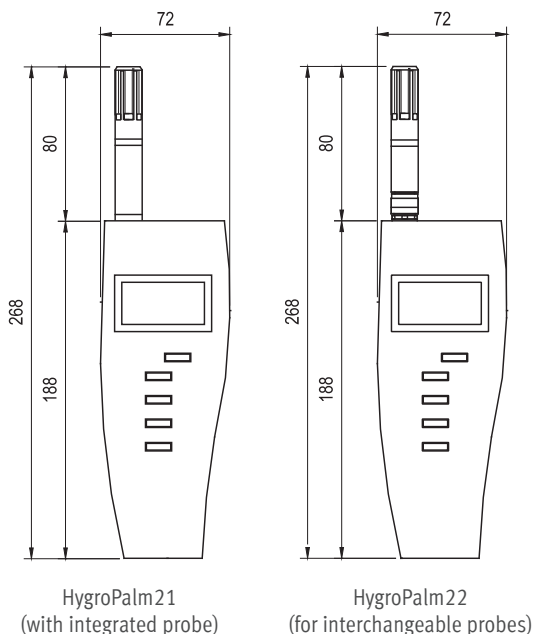
Sensor Diagnostics.

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 on the display.

Data Logging and Alarm Generation.

Up to 2,000 measurement values can be stored in the HygroPalm21 or in the HygroClip2 probe used with the HygroPalm22 the user is able to configure the measurement interval, set alarm limits, scale the output signal and download data using optional ROTRONIC HW4 software.

HygroPalm21
(with integrated probe)

HygroPalm22
(for interchangeable probes)

	HP21	HP22
No. of probe inputs / Probe type	Integrated sensors	1/HygroClip2®
Humidity sensor	Hygromer® M3-R	Depends on probe
Temperature sensor	Pt100 1/3 Class B	Depends 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	‹3 seconds	Depends on probe
Start-up 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	Depends on probe
Max. air velocity at probe	20 m/sec	Depends on probe
Probe adjustment from the keypad	1-point offset	Multipoint
Probe adjustment with 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	Via ROTRONIC Interface cable, HW4 compatible	
Dataprocessing with HW4	Graphs, statistics, analyses, qualification etc.	
Audit Trail & Electronic Records	FDA-CFR21 Part 11 / GAMP compliance	
Housing material / weight	ABS / approx. 210g	
Standards	CE-compliant, 2007/108/EG	
IP & fire protection rating	IP40 / complies with UL94-HB	

rotronic

LEADING IN HUMIDITY MEASUREMENT