

HYGROFLEX5



THE INTELLIGENT TRANSMITTER.

INTRODUCING AIRCHIP DIGITAL TECHNOLOGY.

INNOVATION IN HUMIDITY AND TEMPERATURE MEASUREMENT

- Relative humidity, temperature and dew point measurement
- Psychrometric calculation capability
- Outstanding accuracy and repeatability
- Super-fast probe changes
- Auto-diagnostics and automatic correction
- Highest-possible measuring accuracy
- Freely scalable analog signals
- Network compatibility with to digital outputs
- Internet updates possible



SPECIFY THE BEST: HYGROFLEX5 ADVANTAGES AT A GLANCE.

The new HygroFlex5-series is the latest development in transmitters for humidity, temperature and dew point. One outstanding feature of this innovative product is, the possibility to output all psychrometric calculations as an analog signal.

The HF5-series is compatible with HygroClip2 probes with integrated AirChip3000 technology – thanks to which the probes achieve a degree of accuracy not seen before.

In combination with advances in sensor technology and integration, the HygroFlex HF52-, HF53- and HF55-transmitters provide superb precision and state-of-the-art functionality, taking humidity, temperature and dew point measurements to a whole new level of performance ($< 0.02\% \text{rh}$) and reliability ($< 0.8\% \text{rh}$ and $< 0.1 \text{K}$).

Practical display

- Display of the measured values on a clear, backlit graphic display with trend indicators
- Configuration by keypad possible

Tried-and-tested housing

- Robust industrial housing
- Wall or duct mount versions

Outputs

- Two freely selectable and scalable analog outputs
- Available as 2-wire (HF52), 3/4-wire (HF53) and digital (HF55) transmitter
- Optional digital outputs allow integration on a network via RS485, Ethernet and even wireless connection

Flexible choice of probes

- Connection of various probes possible
- Connection of simulators allows easy process validation

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



APPLICATIONS.

The HygroFlex5-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, meteorology, agricultural sector, archaeology, 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 instrument that best covers your needs.

HF5 wall version



HF5 duct version



PROBES FOR HYGROFLEX TRANSMITTERS.

Whether you need a simple plug-in probe for use with a hand-held 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 Probe

Probe for transmitters in wall or duct versions
Operating range -40...100 °C



Industrial Probes

Probes for process applications. Operating range 0...100%rh,
-50...200 °C (-58...392 °F) and 0...400 bar (0...5,800 PSI)
(also available as screw-in probes)



Interested in further information about the right choice of probe (special applications, order codes, etc.)?

A complete and up-to-date overview of all probe options is available on our web site www.rotronic-humidity.com.

TECHNICAL INFORMATION.

Factory Adjustment.

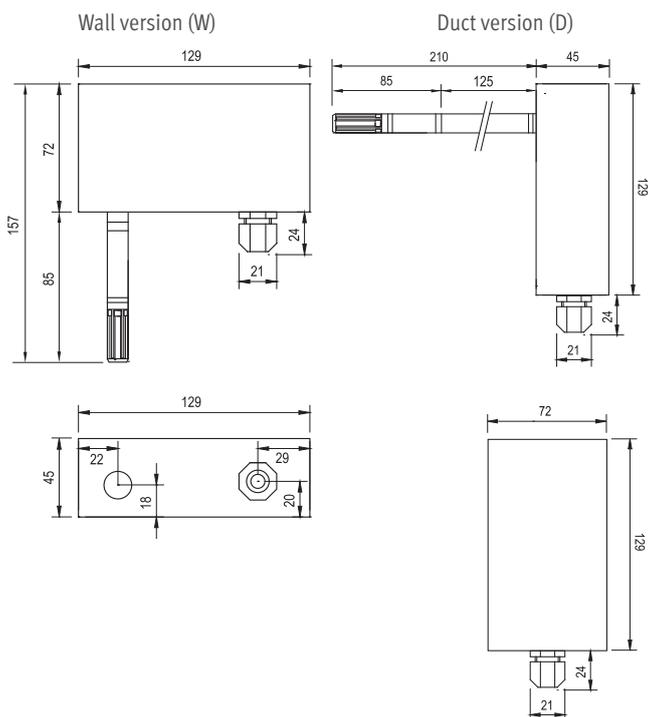
Three different adjustment profiles are available from the factory for HygroClip2 probes and instruments; this means that measuring accuracy can be matched to the application need. The custom adjustment profile consists of 20 humidity values at 3 temperatures to ensure optimum performance over a required 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.



	HF52 2-wire	HF53 3/4-wire	HF55 Digital
Probe type	HygroClip2 probe, various models		
Probe cable extension	Passive: max. 5 m, active 100 m		
Accuracy at 23 ± 5 °C	±0.8 %rh / 0.2 K		
Response time τ 63	3-12 s, depending on probe type		
Initialisation time	HF53, HF55: typically 3 s, HF52: 10 s		
Measurement range	-50...200 °C / 0...100 %rh, probe dependent		
Electronics operating range	-40...60 °C / 0...100 %rh (-10...60 °C with LCD)		
Display (option) (HF52: not illuminated)	Graphic display, backlit Parameters configurable		
Trend indicator	Yes		
Alarm functions (programmable)	Sensor interruption or short circuit		
Output signals	Scalable by user 0...1 V, 0...5 V, 0...10 V, 0(4)...20 mA		
Digital outputs (optional)	Ethernet (LAN, WLAN), USB, RS485		
Change in signal type U/I	HF53 only		
Power supply	HF52: 10...28 VDC (10 V+(0.02x load)) HF53/55: 15...40 VDC / 12...28 VAC		
Power consumption	HF52: max 40 mA, other models < 100 mA LAN option <300 mA		
Circuit type	HF52: 2 x 2 wires, HF53: 3/4 wires, HF55: digital		
Min. / Max. load	V-signal: ≥1 kΩ/V / mA-signal: ≤ 500 Ω		
Load compensation	Yes		
Firmware update	Possible by HW4 software		
Sensor diagnostics (Drift, state)	Programmable. Default: off		
Sensor protection	Polyethylene filter		
Max. wind speed	20 m/s at probe		
Humidity adjustment	by keypad / software: multi point		
Temperature adjustment	by keypad: 1 point, by software: 2 points		
Data logging function	external, 2000 data point memory		
Psychrometric calculations	All selectable		
PC interface	With ROTRONIC interface cable HW4 compatible		
Data processing by HW4	Graphs, statistics, analyses, qualification etc.		
Housing material / weight	ABS / Approx. 220g		
Cable connections	1 x M16x1.5, on terminals		
Norms	CE- compliant, 2007/108/EG		
Audit trail, Electronic Records	FDA CFR21 Part 11 and GAMP compliant		
IP protection rating & fire protection class	IP65 / Corresponds to UL94-HB		

Interested in further information (special applications, order codes, etc.)? A complete and up-to-date overview of our HygroFlex5-series is available on our web site www.rotronic-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.rotronic-humidity.com. We would also be happy to advise you in person either on the phone or at our showroom.

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LEADING IN HUMIDITY MEASUREMENT

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