

# HS5 TRANSMITTERS HYGROSTAT / THERMOSTAT



## HIGH-PRECISION HUMIDITY AND TEMPERATURE MEASUREMENT

- Measures relative humidity and temperature
- All psychrometric calculations available
- Outstanding accuracy and repeatability
- Highest precision
- Dry mechanical relay
- Digital communication via Ethernet
- Freely scalable analog signals
- Update possible via the Internet



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**rotronic**  
MEASUREMENT SOLUTIONS

# HS5S TRANSMITTERS

## TAKE A CLOSE LOOK: THE MAIN ADVANTAGES AT A GLANCE.

The transmitters in the HS5 series are progressive transmitters for accurate measurement of relative humidity and temperature and can convert these to psychrometric parameters as required by the application concerned. Their measurement results can be read out via analog outputs or Ethernet. A relay switches when the switching threshold that has been set is reached. The instruments measure with interchangeable HygroClip2 probes, enabling an unprecedented class of accuracy.

The HS5 boasts a unique calibration and adjustment process and many other unbeatable features. At the same time ROTRONIC has also improved the sensor technology, taking humidity and temperature measurement to a whole new level of performance and reliability: the HS5 transmitters offer repeatability of  $< 0.02\% \text{RH}$  and with the HC2-S guaranteed system accuracy of  $< 0.8\% \text{RH}$  and  $0.1\text{ K}$ .

### Functional display (optional)

- Measurement values displayed on a clear, backlit graphics display with trend indicator
- Configuration possible via keyboard

### Proven housing

- Robust, industrial-quality housing

### Communication

- 2 analog outputs: freely allocatable and scalable
- Ethernet (optional)

### Power supply

- 15...40 VDC/12...28 VAC

### Flexible choice of probes

- Connection of a wide range of probes possible
- Connection of simulators facilitates process validation



## THE APPLICATIONS

The HS5 series is ideal for wherever exact measurement of humidity and temperature is of critical importance: in the food and pharmaceutical industries, printing and paper industries, meteorology, the agricultural sector, archeology, HVAC applications, etc. There is hardly a sector today in which these parameters can be ignored. The measurement task in question ultimately defines which instrument best covers your needs.



Clean rooms



Food industry



Pharmaceutical industry



Hospitals



Meteorology



HVAC applications



Warehousing



Printing and paper industries

## THE PROBES FOR YOUR HS5 TRANSMITTER.

The HygroClip2 comes in various versions: from a simple plug-in probe for handheld instruments and data loggers to highly developed cable probes for high-temperature and other special applications, we can provide you with exactly the right probe to suit your needs. Common to all is their high precision, which, thanks to our patented AirChip3000, can be increased even further through individual adjustment. And that is precisely what makes each probe in our range a high-end product for normal and industrial applications.

### Standard climatic probe

Range of application: -50...100 °C

Variants: Plastic and stainless-steel versions



### Industrial probes for process applications

Range of application: -100...200 °C and 0...100 bar (0...1450 PSI)

Variants: Plastic, stainless-steel and screw-in versions

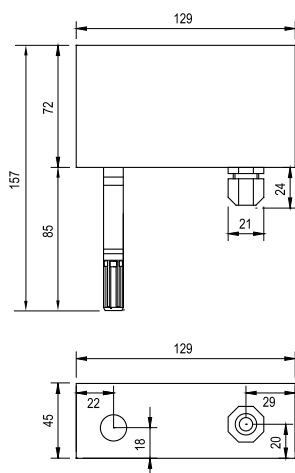


Would you like more information (special applications, order codes, etc.) on the choice of correct probe?

You can find a complete and up-to-date overview of all our probes at our web site [www.rotronic.com](http://www.rotronic.com).

## TECHNICAL INFORMATION

Dimensions (mm)



General	
Device type	Hygrostat and thermostat
Parameters	Relative humidity and temperature
Psychrometric calculations	Yes
Housing material	ABS
IP protection	IP65
Mounting position	Wall mounting
Display	Illuminated graphic LCD
Menu navigation	4 keys (in version with display)
Dimensions	129 x 72 x 45
Weight	240 g
Electrical connections	1 x M16 x 1.5, to terminals
Power supply	15...40 VDC / 12...28 VAC
Current consumption	<70 mA (Ethernet version <150 mA)
Range of application / Storage conditions	-40...60 °C / 0...90 %RH -10...60 °C / 0...90 %RH with LCD
Trend indicators	Yes
External memory function	Yes, 2000 data point memory
Firmware update	Via HW4 software
Service interface	UART
Fire protection class	Corresponds to UL94-HB
CE / EMC compatibility	EMC Directive 2004/108/EC
FDA / GMP conformity	21 CFR Part 11 and GAMP5
Initialization time	<5 s
Measurement of temperature and relative humidity	
Probe types	All HygroClip2 probes
Accuracy at 23 ±5 K	Probe dependent
Response time $\tau_{63}$	Probe dependent
Measurement range	Probe dependent
Measurement interval	1 s
Humidity adjustment	Via keyboard/software: multi-point
Temperature adjustment	Via keyboard 1-point Via software 2-point
Outputs	
Circuit type	3-wire
Analog outputs	2, freely configurable
Analog output type	0...10 V, 4...20 mA, freely scalable
Resolution analog output	16 bit
Digital communication	Ethernet
Minimum load	>10 k $\Omega$ (voltage output)
Maximum load	<500 $\Omega$ (current output)
Load compensation	Yes
Switch output	1 relay (freely configurable)
Relay type	Changeover switch
Switching capacity	<50 VAC / <75 VDC / <1A

Would you like more information (special applications, order codes, etc.) ?

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